

HOUSEHOLD COMPOSITION, ACCULTURATION,  
AND DIET AMONG LOW-INCOME PUERTO RICANS  
IN HARTFORD, CONNECTICUT

By

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HOUSEHOLD COMPOSITION, ACCULTURATION AND DIET AMONG  
LOW-INCOME PUERTO RICANS IN HARTFORD, CONNECTICUT

By

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Chair: Helen I. Safa, Ph.D.

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Research on the relationship between household composition and acculturation on diet among twenty-two, low-income, Puerto Rican nuclear, female-headed and extended family households was conducted in Hartford, Connecticut. Methods included semi-structured and ethnographic interviews, an ethnicity/acculturation measure and extended participant observation.

Children across households consumed a similar number of meals, but snack consumption was higher among extended households. Children in female-headed households consumed less fruit than children in nuclear or extended family households. Vegetable and meat consumption was highest among children in nuclear family households, while dairy consumption was highest for children within female-headed families.

The diets of nuclear families benefited from the presence of a male wage earner, but any change in his economic contribution severely and suddenly impacts food insecurity. Heads of female households employed household survival strategies to combat food insecurity, including long-term meal planning, food rationing, skipping meals and selective purchasing. Transfer payments and food stamps are insufficient to support most families, leading to repeating cycles of food insecurity. Members of extended families, particularly children, benefited from the diets of older members that include more fresh, staple foods, fewer processed foods, and less restaurant food. For all households, Puerto Rican food consumption continued but declined, and American foods were added. Increased meat and vegetable consumption were positively correlated with high ethnicity/low acculturation measures.

Breakfast has become larger and more varied, and meat, processed foods and restaurant food consumption has increased for breakfast and lunch. The consumption of traditional foods for breakfast and lunch has declined, while American foods have increased. Dinner patterns changed the least, but changes included the addition of processed meats, green and orange vegetables, and American mixed dishes.

Dietary recommendations include the replacement of processed foods with fresh and homemade choices, increased fruit and vegetable intake, reduced consumption of salty and high fat foods, and a reduction in the consumption of sugary drinks. Educational programs on frugal shopping and healthy and cost-conscious cooking techniques are needed to improve dietary patterns. Social programs that facilitate the creation of social support networks among low-income women would benefit them and their families psychologically, economically, and nutritionally.

## CHAPTER 1: INTRODUCTION

Hispanics presently are the second largest ethnic group in the United States, but at the current rate of population growth, they are expected to outnumber African-Americans as the largest minority group in the United States. The increasing diversity of the United States has put recent emphasis on the health of minority populations, including health differences between ethnic and racial groups. For example, research has found that cancer mortality rates for middle-aged and older adults are far higher among Blacks and Whites than among Hispanics, and these differences may be partly explained by differences in diet (Maurer et al 1990). The links of nutrition and chronic diseases such as cancer and heart disease, and the rapidly expanding Hispanic population in the U.S., have made nutrition research among Hispanics an important topic of study with inherent public health significance.

The growing literature on Hispanic studies has resulted in an increasing awareness of the differences between Hispanic subgroups in terms of history, culture, politics, socioeconomic status and immigration status. These differences may affect health status, diet, and nutrition, and research that compares Hispanic subgroups has shown that eating patterns do vary considerably among Mexican Americans, Cuban Americans and Puerto Ricans (Sanjur 1982; Loria et al. 1995). For Puerto Ricans, the Island's colonial relationship with the United States, the resulting structural migration streams and U.S.

citizenship create a unique situation that contrasts with other Hispanic subgroups. By concentrating on Puerto Ricans, this project builds on past research that analyzed data on Hispanics as a single group (Block and Subar 1992; Block et al. 1995; Patterson et al. 1995), and on research on Hispanic subgroups that has focused on Mexican-Americans (Stern et al. 1982, 1983; Hazuda et al. 1988; Haffner et al. 1985, 1986; Kaplan and Marks 1990; Guendelman and Abrams 1995; Newell et al. 1988; Immink et al. 1983).

It has been suggested that cultural and ethnic differences in dietary practices may account for some of the variation in disease and death rates between ethnic and racial groups. Nutrition is one of the most important factors affecting the physical well being of adults and children. Diet and nutrition are crucial factors in the prevalence of chronic diseases such as cardiovascular disease, diabetes, hypertension and certain cancers (Block et al. 1992; Steinmetz and Potter 1991). For children, nutrition is the most significant factor affecting physical and cognitive development, and nutrient deficiencies can affect behavior, mood, attention span and learning ability. Dietary patterns established in childhood also can positively or negatively affect adult health status. There is little information on nutrition among children, and even less known about the diet and nutrition of Hispanic children. Furthermore, nutrition data on young children must often rely on an adult's report of intake because of the inability or perceived inaccuracy of children's self-reporting.

Residence in the United States and the adoption of new norms and behavior impacts dietary patterns among Hispanics, and some of these changes may have negative impacts on nutritional status. The investigation of the relationship between acculturation

and dietary patterns can lend insight to differences in nutritional status and health outcomes among Hispanics and between Hispanics and other ethnic and racial groups.

This study brings these issues together through the investigation of diet, household composition and acculturation among Puerto Rican low-income families living in Hartford, Connecticut. This research provides micro-level, ethnographic data valuable for creating culturally appropriate educational campaigns, improving nutritional status and guiding food, nutrition and welfare policy-making. These in-depth, ethnographic data are a perfect complement to large-scale health surveys such as the National Health Interview Survey (NIHS), the first, second and third National Health and Nutrition Examination Surveys (NHANES, NHANES II and NHANES III) and the Hispanic Health and Nutritional Examination Survey (HHANES). Anthropological, ethnographic methods further our knowledge of Hispanic consumption behavior because, “dietary patterns are intimately linked to cultural behavior that is learned patterns and shared with other members of a social group, as well as to individual behavior that is unique and internalized” (Sanjur 1995:109).

### Objectives and Research Questions

The project had two main areas of research.

#### Research Objective One: Household Type and Diet

The first objective of this project was to explore the relationship between dietary intake patterns and household composition, i.e., nuclear, female-headed and extended households, in low-income Puerto Rican urban households.



The following research questions were asked:

- How is household size and composition related to consumption patterns?
- Do households that differ in size and composition consume different foods?
- What beneficial and detrimental patterns exist?
- How do household dietary patterns differ with household composition?

#### Research Objective Two: Acculturation and Diet

The second objective of this research was to explore the relationship between ethnicity, acculturation and diet.

The following research questions were asked:

- How does acculturation affect eating behaviors and consumption patterns, both beneficially and detrimentally?
- What facets of ethnic diet are maintained, and what new foods and consumption patterns are adopted?
- What factors promote or inhibit these changes?

In order to address questions of acculturation and diet, the researcher created an instrument for measuring ethnicity and acculturation among Puerto Ricans. Details on this instrument are discussed in Chapter 3, Methodology, and the instrument is provided in Appendix C.

#### The Research Setting

##### Puerto Ricans in Connecticut

The high levels of post-World War II Puerto Rican migration to the United States are reflected in the Connecticut population. In 1960, there were approximately 15,000 Puerto Ricans in the state. By 1970, this figure had more than doubled to over 38,000,

and the population more than doubled again by 1980, reaching over 88,000. By 1990, the population had risen to over 140,000 (Table 1-1). (U.S. Bureau of the Census).

Table 1-1 Puerto Rican Population of Connecticut, 1960 to 1990

	Number of Puerto Ricans	Population Increase	Percent Increase
1960	15,247	n/a	n/a
1970	38,493	23,246	60.4
1980	88,361	49,868	56.4
1990	140,143	51,782	36.9

(Source: U. S Bureau of the Census)

Table 1-2 Hispanic and Puerto Rican Population of Connecticut, 1990

	Number	Hispanics as % Of Total Population	Number of Puerto Ricans	Puerto Ricans as % of Total Population	Puerto Ricans as % of Total Hispanic Population
Connecticut	213,116	6.5	140,143	4.5	65.8

(Source: 1990 U. S Bureau of the Census)

In 1990, 6.5% of Connecticut's population was Hispanic; Puerto Ricans comprised 4.5% of the state's total population in that same year. Puerto Ricans comprise the majority Connecticut's Hispanic population, almost 66% (Table 1-2).

### Puerto Ricans in Hartford

As Whites left urban areas for the suburbs in the post World War II years, Latinos and African Americans moved into the cities. In Hartford, the overall population declined from 177,000 in 1950 to 136,000 in 1980 (Backstrand and Schensul 1982). Therefore, Puerto Ricans are becoming a stronger presence not only in number, but also in percentage of the total population.

In recent decades, Hartford's Puerto Rican population has become sizable. In 1980, there were over 26,000 Puerto Ricans living in Hartford; by 1990, the number had increased to almost 38,000. In 1990, Hartford had the fifth largest Puerto Rican

population of any city in the U.S. according to the 1990 Census, topped only by New York City, Chicago, Philadelphia and Newark. In that same year, Hartford had the highest concentration of Puerto Ricans in any U. S. city, comprising 27% of the total population (Table 1-3).

Table 1-3 Hispanic and Puerto Rican Population Hartford, CT, 1990

	Number of Hispanics	Hispanics as % Of Total Population	Number of Puerto Ricans	Puerto Ricans as % of Total Population	Puerto Ricans as % of Total Hispanic Population
Hartford	43,372	31.0	37,732	27.0	87.0

(Source: 1990 U. S Bureau of the Census)

Hartford's Hispanic community is comprised of individuals from all parts of Latin America and the Caribbean, including Mexico, Cuba, the Dominican Republic, Central and South America. Puerto Ricans comprise 87%, the vast majority, of the city's Hispanic population (Table 1-4).

Table 1-4 Composition of Hispanic Population of Hartford, 1990

	Number	Percent
All Hispanic	43,372	100.0
Puerto Rican	37,732	86.9
Mexican	498	1.1
Cuban	685	1.6
Dominican	471	1.1
Central American	288	.7
South American	1,805	4.2
Other Hispanic	1,893	4.4

(U. S Bureau of the Census 1990)

Between 1980 and 1990, Hartford's Puerto Rican and Latino population grew rapidly, but in the 1990s, growth slowed and stopped in Hartford, while the number of suburban Latinos has continued to grow. By 2002, slightly more than half the Latinos living in Hartford County are expected to live outside the city proper. School enrollment

figures indicate that Manchester, Vernon and a number of other Hartford suburbs have become the new Latino hot spots for middle class Puerto Ricans (Osorio Colon 1996).

This points to a trend in Hartford that could impact the strength and status of the Puerto Rican community within the city: Puerto Rican flight (Osorio Colon 1996). Puerto Rican flight is a part of the larger trend of middle-class flight, as those with higher socioeconomic status leave the inner city for the suburbs and smaller towns. As some Puerto Ricans move up the socioeconomic ladder, they have been leaving the city, and leaving behind poorer Puerto Ricans. While to some migration away from urban areas robs the city of community leaders, social resources and political and economic power, for others it is simply the result of increasing their socioeconomic power that enables them to move themselves and their families out of the city. In either case, it is a sign of the growing inequality within the Puerto Rican community, while more educated Puerto Ricans become more affluent, and those with little education or low skill levels are left behind to deal with the severe impacts of a shrinking economic base in the inner city.

Table 1-5 Household Income by Race, Hartford, 1990

	Hispanic		White		Black	
	N	Percent	N	Percent	N	Percent
< \$9,999	5,199	40.9	4,668	19.8	5,376	27.6
\$10,000- \$24,999	3,545	27.9	6,527	27.7	5,696	29.3
\$25,000- \$49,999	3,000	23.6	7,785	33.0	6,038	31.2
\$50,000- \$74,999	769	6.0	2,897	12.3	1,635	8.4
\$75,000+	197	1.6	1,697	7.2	688	3.5

(U.S. Bureau of the Census 1990)

Census data show a large percentage of Hartford's Hispanics are living in poverty.

Table 1-5 shows in 1990, a larger percentage of Hispanic households were earning only \$9,999 or less compared to other racial groups (40.9% for Hispanics, compared with 19.8% for Whites and 27.6% for Blacks).

Table 1-6 shows the per capita income for Hartford residents by race and ethnicity. The data show Hispanic households were making only 55.7% of the per capita income for all persons, the least of all racial and ethnic groups.

Table 1-6 Per Capita Income, Hartford, 1989

	Per Capita Income	Percent of per Capita Income for All Persons
All Persons	\$11,081	100.0
Hispanic	\$6,169	55.7
White	\$15,140	136.6
Black	\$9,661	87.2
Asian	\$9,807	88.5
American Indian, Eskimo, Aleut	\$8,364	75.5

(U.S. Bureau of the Census 1990)

Table 1-7 shows children in Hartford are a large percentage of persons living below the poverty line. Children less than seventeen years old comprised 43% of the Hispanic poor in 1989.

Table 1-7 Persons with Income Below Poverty Level, Hartford, 1989

	Hispanic		White		Black	
Age	N	Percent	N	Percent	N	Percent
< 5 years	3,446	17.2	948	11.3	2,116	14.9
5 years	596	3.0	126	1.5	440	3.2
6-11 years	3,772	18.8	1,138	13.6	1,946	13.7
12-17 years	2,794	14.0	771	9.2	1,637	11.6
18-64 years	9,008	45.0	4,348	51.8	7,083	50.0
65-74 years	282	1.4	473	5.6	498	3.5
75 years +	129	.6	582	7.0	442	3.1

(U.S. Bureau of the Census 1990)

This project and previous research in Hartford has focused on addressing the socioeconomic situation of poor Puerto Ricans remaining in Hartford's inner city. Researchers at the Connecticut Family Nutrition Program, a collaboration between the University of Connecticut, Storrs and the Hispanic Health Council, interviewed almost two hundred fifty Latino primary caretakers of children aged one to six years (Perez-Escamilla et al. 1997). This study found almost one-fifth of the study children were classified as hungry, and over eighty percent of the respondents were anxious about running out of food in the future. Over 23% of the respondents had been homeless, and 16% had been homeless after the study child was born. Over 35% of the household heads were unemployed. More than half, 65% of the caretakers interviewed, said they usually ran out of food stamps before or by the third week of the month, and 14% said their food stamps lasted only one week. The average duration of food stamps was twenty-one days. More than 80% of respondents said they worry whether food will run out before they get money to buy more, and almost three-quarters worry whether the food they could afford will be enough. Over 60% of respondents said they have experienced not having enough food to put a meal together.

Table 1-8 shows household type by race and ethnicity for the city of Hartford in 1990. Black and Hispanics had a lower percentage of married couple households than Whites (24.7% for Hispanics and 23.6% for Blacks, compared to 32.5% for Whites). The percentage for male-headed households was relatively low for all four groups (6.9% for Hispanics, 3.9% for Whites and 5.3% for Blacks). The percentage of female-headed households among Hartford's Hispanics was the highest of the three groups: 47.2%, compared to 13% for Whites and 37.7% for Blacks (U.S. Bureau of the Census 1990). A

community needs assessment in Hartford found 78% of the Hispanic women interviewed considered themselves head of their household, while 36% reported the biological father of the study child lived in their household (Perez-Escamilla et al 1997).

Table 1-8 Household Type by Race and Ethnicity, Hartford, 1990

	Hispanic		White		Black	
	N	Percent	N	Percent	N	Percent
Married Couple	3,137	24.7	7,661	32.5	4,580	23.6
Male-headed	876	6.9	918	3.9	1,040	5.3
Female-headed	6,008	47.2	3,067	13.0	7,326	37.7
Non-family	2,689	21.1	11,928	50.6	6,487	33.4

(U.S. Bureau of the Census 1990)

### Contributions of the Research

#### Applied Contributions

This research project has applications that can benefit low-income women and children by informing health professionals, social institutions and policy makers. The data can be used to improve the nutritional status of low-income Puerto Rican families through applied household economic management strategies conferred through culture-specific and culturally appropriate educational campaigns. Furthermore, these campaigns and educational programs can address specific needs and deficiencies of adults and children that are based on first-hand observation.

This research also adds to the understanding of dietary patterns of at risk populations, including low-income families, children, and Puerto Ricans. Indeed,

Hispanics have been identified as being especially underserved by public health education and intervention programs (Ballew and Sugerman 1995). There is little information on the diet and nutrition of Hispanic children. Nutrition data on young children must often rely on an adults' report of intake, because of the inability or perceived inaccuracy of children's self-reporting. Data deficiencies caused by second-hand reporting can be remedied through the direct observation of children's dietary intake patterns. Such knowledge is key to addressing the needs of an increasingly diverse population

Ethnographic research within households revealed there is great diversity in the actual economic position and living standards of families defined as low income. Household economic status is impacted by household size and composition, particularly in terms of the number of wage earners per household, the number of children in the household, the presence of family or non-kin social networks, and other factors. Social assistance programs targeting low-income families must address the economic heterogeneity of this population and the resulting heterogeneity of their resources, problems and needs.

Programs aimed at positively influencing dietary patterns among low-income families should place diet and nutrition within the larger context of physical and mental health. For children, other health issues such as lead poisoning and asthma affect dietary patterns and nutritional status, while for women, health conditions such as pregnancy, diabetes or smoking, may influence diet and nutrition. Psychological and emotional issues, including physical or sexual abuse, depression, and loneliness, are also linked with dietary intake patterns.

Access to social networks has definite advantages. Mutual assistance and pooled



resources in the form of shared childcare and domestic duties, or mutual financial assistance, not only makes day to day living easier, it also provides a safety net in times of economic need. Social networks also provide friendship and personal contact, especially important for recent arrivals, monolingual Spanish speakers or single parents, all of whom can feel especially isolated after moving to the mainland. Housing plans and social programs that facilitate the creation of social networks among low-income women would benefit them and their families psychologically, economically and nutritionally.

### Scientific Contributions

This project also contributes to the larger body of scientific knowledge. An ethnographic investigation at the household level allows an in-depth look at the effects of ethnicity and acculturation, family and household patterns, migration patterns and socioeconomic status on the diets of Puerto Rican adults and children.

This research showed dietary changes for immigrants, as well as the retention of traditional dietary patterns, are influenced by cultural, social, economic, political and historical factors. U.S. cultural patterns affect the dietary patterns of many immigrants prior to migration because of global economics, transnational media, and communication and transportation technology. After migration, the nature, degree and speed of dietary change varies between individuals and households because of mediating factors, such as migration and settlement patterns, the social and economic structure of the receiving community, interaction outside one's ethnic group, family type, household composition, and socioeconomic status. Furthermore, changes in dietary patterns in this project challenges views that acculturation only negatively affects diet and nutritional status. While some changes in diet found were negative, such as an increase in the use of

processed foods, other changes observed were positive, such as the addition of cruciferous vegetables and those high in beta-carotene.

In addition, this research contributes to the study of Hispanics in the United States outside traditional areas of large-scale settlement. Much of the literature on Latinos in the U.S. has focused on cities that have been the traditional destinations of Latin American and Caribbean immigrants, such as Puerto Ricans in New York City, Cubans in Miami and Mexicans in Los Angeles. However, census data show increasing numbers of Hispanics are expanding into areas not previously characterized by large-scale or long-term Hispanic settlement, including smaller cities, towns and suburban areas (Stains 1994; Frey and O'Hare 1993). In the Puerto Rican case, despite their geographical expansion, a significant amount of research has focused on the New York City population. Data on Puerto Ricans in other areas of the U.S. show diversity in family structure, employment status, income levels and poverty rates when compared to New York City Puerto Ricans (Rodriguez 1991). Research with Puerto Ricans in Hartford can assist in uncovering this inter-group diversity to provide a clearer understanding of the experiences of Puerto Ricans in the continental United States.

Acculturation instruments that focus on a few variables, such as nativity or language, are not sufficient to measure acculturation among an immigrant population whose culture has been greatly influenced by U.S. colonialism, and whose citizenship status allows free movement between their sending communities and the mainland United States. The acculturation instrument created for this project focuses on a wider scope of variables, including beliefs and behaviors concerning family and social relations, politics, ethnicity and culture, language and popular culture, thereby expanding the scope of viable

measures of ethnicity and acculturation. The creation of an instrument to measure ethnicity and acculturation among Puerto Ricans also adds to the growing literature on acculturation, and is applicable in future research on this population (Appendix C).

### Overview

Chapter 2 is a literature review that includes information on the history and theory of Puerto Rican migration to the mainland United States. Also discussed is past research on Hispanic diet and nutrition, including an investigation of the Puerto Rican diet over time. Lastly, a review of the literature on Hispanic household composition is presented, with a focus on female-headed households.

Chapter 3, Methodology, presents an overview of the methods used in this research. Methods used included an hour-long semi-structured interview to gather demographic data on the caretakers and study children, household data, and information on the adults' migration patterns. The initial interview also included an ethnicity/acculturation measure designed specifically for this project. This instrument investigated acculturation through indicators including ethnic self-identification, language use and proficiency, structural assimilation into U.S. society, political participation in Puerto Rico and the U. S., ethnic boundaries of social relations, media and popular culture, family patterns and values and the importance placed on preserving ethnic identity and culture.

Dietary intake was measured with a food frequency questionnaire. Data on household dietary patterns were also gathered through extended participant observation, as well as ethnographic interviews that were tape recorded and fully transcribed.

All statistical analyses were conducted using SPSS for Windows. The relationship

between household type and dietary intake was explored by disaggregating and comparing daily mean consumption events by household type for the five main food groups, as well as traditional ethnic foods. The relationship between acculturation and diet was explored with bivariate correlations between the respondent's ethnicity/acculturation measures (EAMs) and daily mean consumption events

Chapter 4, Findings and Discussion, begins with census data on Puerto Ricans in Connecticut and Hartford, and then proceeds to a description of the research setting of this project, the Frog Hollow neighborhood of Hartford. Demographic data on the adult and child research subjects are presented, as well as household data. Data on the adult's ethnicity and level of acculturation, migration patterns, and linguistics are also presented. The relationship between ethnicity, acculturation and dietary intake was explored, as well as the relationship between household type and dietary intake.

Chapter 5 includes a summary of the research findings and concluding comments, including dietary recommendations for low-income Puerto Ricans.

## CHAPTER 2: LITERATURE REVIEW

### Theories of Migration

The analysis of Puerto Rican migration to the United States has focused on different forces and processes. In the 1960s and 1970s, migration theories such as the "push-pull" theory focused on an individual's reasons for migrating. Lee (1966) theorized social or economic benefits in receiving communities and detrimental socioeconomic factors in the sending communities "pull" and "push" individuals into migrating. In the Puerto Rican context, overpopulation and declining economic opportunities in Puerto Rico were believed to "push" individuals off the Island, while others argued job opportunities on the mainland "pulled" Puerto Ricans into migrating.

In the 1980's, critics of push-pull theories have explained a focus on the individual alone ignores larger political, social and economic forces that influence migration. These theories also do not predict the origin of migration flows or changes in migration patterns (Fernandez-Kelly 1983; Portes and Bach 1985). Furthermore, Caribbean migration to the United States remains consistent even in times of economic crisis in the U. S., when the "pull" to migrate should be diminished (Palmer 1990).

Migration scholars have incorporated household analysis into the study of migration decision-making (Pessar 1982; Grasmuck and Pessar 1991; Selby and Murphy 1982). Household processes mediate the circulation of labor, capital, services, information

and ideology. The "household is the social unit that makes decisions about whether migration will occur, who will migrate, and whether the migration will be temporary or permanent. These decisions . . . are guided by kinship and gender hierarchies of power within the household" (Grasmuck and Pessar 1991:15). Some household level analysis has assumed the household is a bonded unit where a household head makes decisions in a moral economy, where all members of the household will benefit from migration; others have challenged this egalitarian view (Grasmuck and Pessar 1991; Hondagneu-Sotelo 1994).

A structural analysis of migration focuses on larger economic and political systems that form migration flows from less developed sending communities to more developed receiving communities (History Task Force 1979; Sassen-Koob 1988). Migration is linked to the international system of development and underdevelopment and the international division of labor: the Caribbean became a supplier of raw materials and surplus value transferred from the periphery to the core, caused by the world wide system of capitalist accumulation (Watson 1983). "Caribbean peoples are pulled and displaced by conditions, forces and activities emanating from the target societies" (Bryce-LaPorte 1983:7). Structural linkages between sending and receiving communities are fundamental factors affecting the size, direction and duration of migration flows.

Structural linkages can explain large-scale migration from Puerto Rico. Structural forces linked to the colonial relationship between the United States and Puerto Rico have led to the continued and large-scale migration from the Island. The historical, political and economic legacy of United States colonialism that began in 1898 creates a continued economic dependence on the U.S., forcing a surplus labor force in Puerto Rico to migrate

off the Island (Task Force 1979; Maldonado-Denis 1972; Rodriguez 1991). The recruitment of Puerto Rican workers by U.S. companies, low transportation rates set by the U.S. government, and U.S. citizenship create structural linkages that facilitate Puerto Rican migration (Morales 1986; Padilla 1987). Economic, social and cultural factors such as household structure and composition, social networks, gender relations and generational differences mediate such structural linkages (Grasmuck and Pessar 1991; DeWind and Kinley 1988; Boyd 1989). These forces have created a migration flow from Puerto Rico so vast it has been called a "Puerto Rican diaspora" (Lopez 1974).

#### Migration from Puerto Rico

Puerto Rican migration to the U.S. can be analyzed in three historical phases (Stevens-Arroyo and Diaz-Ramirez 1982; Rodriguez 1997).

The first, 1900-1945 is the time when the first Puerto Ricans arrived on the mainland, and the majority of them settled in New York City. The decline of the U.S.-controlled sugar industry in Puerto Rico in the 1920's resulted in high unemployment and poverty rates in Puerto Rico, leading to the first wave of migration (Rodriguez 1989). Industrial and agricultural contract laborers were recruited from Puerto Rico to work in different areas of the U.S., beginning the dispersion of Puerto Ricans to communities in Hawaii, San Francisco, New Orleans, Arizona, Indiana, Ohio and Connecticut (Maldonado 1979; Rodriguez 1991; Kanellos 1993; Glasser 1997).

Unlike other Hispanic groups, Puerto Ricans have entered the U.S. freely since the Jones Act of 1920 granted citizenship to all Puerto Ricans, including those born on the Island. Immigration quota acts in 1921 and 1924 curtailed immigration from eastern and southern Europe and Asia, urging employers to recruit workers from Puerto Rico and

Mexico to fill their labor demands. By 1930, there were over 50,000 Puerto Ricans living on the mainland, with the majority living in New York City. The core communities at that time were Brooklyn, the Bronx and East Harlem, and these areas remained the primary settlement area for many Puerto Ricans to follow. Furthermore, 95% of the immigrants that came to the mainland in the 1950's also settled in these areas.

The second phase of migration, 1946-1964, was the time in which the greatest number of Puerto Ricans came to the U.S., with the largest migration occurring after World War II. During the 1940's, 150,000 Puerto Ricans migrated to the mainland, and at its peak in the 1950s, migration reached over 470,000 individuals (Vazquez Calzada 1979; Rumbaut 1996). In 1940, almost 90% of Puerto Rican immigrants were still residing in the New York City area (Centro de Estudios Puertorriquenos 1983).

This large-scale migration was linked to economic development in Puerto Rico. In the 1940s, Puerto Rico had one of the highest infant mortality rates and one of the lowest rates of average income per worker in the world. Under colonial control by the U.S., Puerto Rico had become "the poor house of the Caribbean" (Morales 1986). To combat poverty on the Island, an economic strategy aimed at providing employment opportunities and stimulating economic growth was initiated. Through the investment of foreign capital and the use of the surplus labor force in Puerto Rico, Operation Bootstrap was aimed at promoting foreign, mostly U.S. investment in light industry and manufacturing. Although jobs were created for some Puerto Ricans, the benefits of Caribbean industrialization were not enough to provide the economic growth and employment opportunities to absorb the surplus labor force, leading to high out-migration (Palmer 1990).

As migration was approaching its peak years in the 1950s, the majority of Puerto



Ricans were working class, with 85% working in blue-collar jobs (Centro de Estudios Puertorriquenos 1983). Women were concentrated as operatives and clerical workers, making less money than males employed in the same positions (Centro de Estudios Puertorriquenos 1983).

The recruitment of agricultural workers beginning in the 1940s brought thousands of Puerto Ricans to the United States, and was the root of Puerto Rican migration to Connecticut. From 1964 to the end of contract labor recruitment ten years later, 1,800 to over 6,000 Puerto Ricans were recruited annually to work in the Connecticut (Backstrand and Schensul 1982), and in 1955, the Migration Division of the Puerto Rican Department of Labor opened an office in Hartford to handle these large numbers (Glasser 1997). Although Puerto Rican agricultural workers labored all over the state of Connecticut, most worked in the "Tobacco Valley" from Hartford to Springfield. Many of these workers had been recruited from rural tobacco producing areas of Puerto Rico, including Caguas, Aibonito, Guayama, Cidra and Humacao. The majority of workers were Spanish-speaking, young married men with low educational levels (Glasser 1997). Many of these men left large extended families in Puerto Rico that relied on remittances for their economic survival. Female Puerto Rican farm workers were also recruited as day haulers (Glasser 1997).

Labor intensive agricultural work in Connecticut provided poor working conditions for Puerto Ricans, involving long working days, residence in crowded, derelict work camps, inadequate medical care and an insufficient food supply. Circulatory problems, strokes and heart attacks associated with working conditions had decreased workers' life expectancy fifteen years below the national average (Glasser 1997). Wage

deductions for food, housing, and insurance left workers less than one-third of their original earnings, while being dependent on pricey company stores (Glasser 1997). To combat such conditions, farm worker advocacy organizations such as the *Ministerio Ecumenico de Trabajadores Agrícolas* (META) and the *Asociación de Trabajadores Agrícolas* (ATA,) later affiliated with the United Farmworkers, began in the 1970s. Media coverage of the poor conditions faced by farm workers in Connecticut led the Department of Labor to reduce their contracts, and the number of workers dropped from 12,700 in 1974 to fewer than 6,000 in 1975. By 1984, there were less than 2,000 agricultural workers in Connecticut (Glasser 1997).

The last phase of Puerto Rican migration, 1965-present, involves a fluctuating pattern of migration from the Island and the continuing dispersion of Puerto Ricans to areas throughout the United States. The years from 1960-1969 showed a decrease in the number of immigrants, but the figure was still quite high, at approximately 250,000 (Vasquez Calzada 1979). This era also saw the beginning of return migration to Puerto Rico. In the 1950s, approximately 50,000 Puerto Ricans returned to the Island, and over 280,000 individuals returned to Puerto Rico in the 1960s (Vasquez Calzada 1979).

Foreign investment and industrial expansion in Puerto Rico continued into the 1960s, but the industries that had developed on the Island were becoming increasingly capital intensive and were not reinvesting in the Island's economy, but rather were draining financial benefits off the Island. The result was an expanding surplus labor force that could not find employment. Increased industrialization created job openings for some of the surplus labor force, and pressure from unions in the United States caused wages in Puerto Rico to increase. However, the promise of increased employment opportunities

provided by U. S. investment in industry did not provide sufficient opportunities to absorb the labor force of Puerto Rico, and migration reached new heights during the time of industrialization.

In 1960s and 1970s, Puerto Rican communities on the mainland began arising outside New York City because of employment in textile mills in Rhode Island and Connecticut, in factories in Chicago, and in steel mills in Pennsylvania, Ohio and Indiana (Padilla 1987; Rodriguez 1991). Puerto Rican migrants moved out of Connecticut agriculture and were easily incorporated into industrial and services sector jobs (Backstrand and Schensul 1982; Glasser 1997).

In 1970, approximately half of Puerto Ricans in the U.S. were living in New York City, and there was a significant Puerto Rican population in six other states, including New Jersey, Illinois, Pennsylvania, Connecticut, California, and Florida (Morales 1986; Vazquez Calzada 1979). By 1980, the majority of Puerto Ricans were living outside New York (Rodriguez 1991), and 87,000 Puerto Ricans migrated out of New York City between 1985 and 1990 (Stains 1994). This reflects the larger trend of Hispanics expanding into smaller cities, towns and suburban areas (Stains 1994; Frey and O'Hare 1993).

#### Acculturation

Acculturation is the process of cultural adaptation that occurs when groups of individuals from different cultures come into contact, leading to changes in the cultural patterns of either or both groups. Acculturation does not only occur when the minority or newcomer group adopts the customs, language, beliefs and worldviews of the larger society. In reality, acculturation is a reciprocal process where the minority group also

affects the behaviors, norms and beliefs of the larger group. Acculturation is an ongoing process that involves significant changes in behavior, such as the acquisition of a new language, as well as the adoption of new behavioral norms and values (Rogler et al. 1991).

Early scholars of acculturation, then using the word assimilation, theorized on the cultural processes immigrants would experience upon migration. The assimilationist perspective states immigrants to the U.S. will inevitably experience assimilation, the gradual loss of cultural identity and the adoption of the values, beliefs and behaviors of their new environment. Assimilation theories grew out of the Chicago School in the 1920s and 1930s, when sociologists and anthropologists began to investigate to what extent ethnic groups remain distinct in U.S. cities, as well as how ethnic distinctiveness is maintained.

Some argued that intergroup interaction inevitably would go through stages of a race relations cycle (Park 1950). Societal changes such as out-migration lead to recurring cycles in intergroup history: contact (i.e., the coming together of different groups), economic competition, accommodation (i.e., the forced adjustment by the migrating group to their new environment) and eventual assimilation. Park argued this cycle was progressive and irreversible, and that there is a long-term trend towards the assimilation of racial and ethnic minorities in modern societies. Park saw the urban environment as an ecological system with diverse opportunities and containing distinct "social worlds" based on class, race, and ethnicity. Social worlds correspond to neighborhoods divided by unequal access to economic resources. Mobility within the system is achieved through "acculturation"-- the adoption of the Euro-American, English-speaking majority's values, beliefs and ways of life.

Milton Gordon's (1964) model of assimilation presented three competing views of assimilation: the melting pot, in which immigrant groups would blend into a new, uniquely American culture, cultural pluralism, where immigrants create ethnic enclaves that replicate their familiar cultural environments, and Anglo conformity, where immigrants abandon their culture and adopt the predominant, preexisting "Anglo culture." Gordon argued Anglo conformity most closely defines the immigrant experience in the U.S., and believed successive generations would be more assimilated into the dominant Anglo culture than their predecessors.

Contrary to assimilationist theories that predict ethnic identity will diminish with successive generations of immigrants, research on Latinos and other immigrants to the U.S. has shown the opposite (History Task Force 1979; Portes and Bach 1985; Padilla 1987; Rodriguez 1991; Safa 1988; Duany 2000). Instead of finding ethnic identity has disappeared, immigrants from Latin America and the Caribbean have retained their ethnic identity, despite incorporation into U.S. culture. Research on Puerto Ricans in New York City found over ninety percent spoke Spanish in their home, although many New York Puerto Ricans are second and third generation immigrants (Rodriguez 1991). Puerto Ricans are maintaining ethnic markers such as the Spanish language, traditional music, dance, and food (Safa 1988).

The experiences of Latinos in the U.S. have mandated the replacement of an assimilationist perspective with one of ethnic pluralism. This theory depends on the appreciation and value placed upon the cultural heritage of both the immigrant group and the wider society. Rather than stressing the abandonment of one's cultural heritage, i.e., assimilation, or the melding of different ethnic groups into a new identity, i.e., the melting

pot, cultural pluralism promotes the continuation of unique cultural, racial and ethnic identities within the larger U.S. culture (Pedraza-Bailey 1985; Safa 1988). Acculturation is not a linear process and the loss of ethnic identity is not a prerequisite to cultural adaptation. As Berry's (1980) model of acculturation stated, there is a wide range of responses to learning to live in a new cultural environment.

Today, global mass media, rapid transportation and information technology further complicate the process and study of acculturation, because cultural exchange can now begin before migration. This pre-migration acculturation is an especially important concept in the Puerto Rican context because of the colonial relationship between the United States and the Island. American culture has been exported to the Island since it became a commonwealth of the United States. Furthermore, as U.S. citizens, Puerto Ricans do not face the immigration barriers confronted by other Latin American and Caribbean immigrants, but rather can move freely from the Island to the continental United States. This has resulted in some Puerto Ricans frequently moving back and forth from the Island to the mainland, resulting in circular migration. Circular migrants continuously bring U.S culture to the Island, and Puerto Rican culture back to the mainland.

Puerto Rican migration is a complex process that has resulted in transnational and deterritorialized identities. The freedom of movement to and from Puerto Rico, the political and economic relationship of the United States with Puerto Rico and communication and transportation technology all facilitate the broadening of Puerto Rican identity. Puerto Rican identity cannot be fully defined within a nationalist perspective that concentrates on linkages to Puerto Rico *or* the United States. Rather, like other

immigrant groups, Puerto Rican identity includes transnational linkages that cross physical, political, social and cultural borders (Basch et al.1994; Duany 2000).

### Acculturation and Health

Acculturation can be evaluated in terms of its influence on health behaviors and outcomes, although the analysis is complicated by factors such as socioeconomic status. The effects of acculturation have been studied in relation to a wide range of health concerns, including alcohol consumption, cigarette smoking, preventive care, prenatal care, obesity and diabetes, and pregnancy and birth outcomes (Caetano 1998; Markides et al. 1988, 1990; Stroup-Benham et al. 1990; Marin and Posner 1995; Kaplan and Marks 1990; Marin et al. 1989; Perez-Stable et al. 1989b; Solis et al. 1990; Suarez 1994; Markides and Coreil 1986; Scribner and Dwyer 1989; Balcazar and Cobas 1992; Balcazar et al. 1993; Stern et al. 1981; Haffner et al. 1986; Perez-Stable 1989a; Stern et al. 1981; Hazuda et al. 1983, 1988; Stern et al. 1982, 1983).

While some research has found more positive health behaviors and outcomes will accompany acculturation into U. S. society, others state that increased acculturation is associated with the adoption of detrimental health behaviors outcomes. For example, increased acculturation had an effect on the decline of obesity and diabetes among Mexican Americans (Stern et al. 1982), while low acculturation levels have been found to be associated with lower infant mortality rates and lower rates of low birth weight (LBW) among Mexican-American mothers (Markides and Coreil 1986; Balcazar and Cobas 1992). Gender differences also complicate the analysis of acculturation and health. Perez-Stable et al. (1989b) found higher levels of acculturation for men resulted in decreased smoking, while the opposite was found for females.

## Hispanic Diet and Nutrition

### Changes in the Puerto Rican Diet

Changes in the Puerto Rican diet on the Island have occurred over time. From the 1950s to the 1970s, there was an increase in the consumption of beef, chicken, processed meats, milk, eggs, legumes and fruit juice. There was also an increase in the consumption of fruits and vegetables, but consumption was still low. Welfare programs such as food stamps had improved nutritional status, and had addressed nutritional differentials between rural and urban communities and between social classes. Over-consumption and its associated risks to nutritional status had begun (Sanjur 1995). At the same time, the nutritional status of households in Puerto Rico was similar to those of households in the continental United States. Puerto Ricans had diets that supplied the recommended daily allowances for protein, iron, calcium, magnesium, phosphorous, vitamin A, thiamin, vitamin B12, vitamin B, and vitamin C, as often as diets in the continental United States (Sanjur 1995).

In the 1980s, the consumption of traditional foods, such as rice, beans and *viandas*, had continued, but new foods had been added to the diet, including some vegetables, although usually just a salad. Fruit and dessert intake had increased, and desserts now included more processed, purchased foods such as cakes, crackers and cookies.

Meal composition in Puerto Rico has also changed over time. In the past, breakfast was simple and light, including a few traditional staples such as *café con leche*, bread, hot cereal or *viandas*. In 1980, *café con leche* was still popular, but breakfast foods had expanded to include protein sources, such as eggs or cheese.



Dinner dietary patterns changed over time as well. Traditional staples such as rice and beans remained common components of dinner, but the consumption of *viandas*, had decreased due to the reduction of household horticulture and the resulting high cost because of their decreasing availability. Meat was now commonly served at lunch and at dinner, and snacks had also become more common (Sanjur 1995).

#### Contemporary Hispanic Diet and Nutrition

A review of the literature on Hispanic diet and nutrition shows that although the study of health behaviors of U.S. minorities is getting increasing focus, there is still much to be learned. The data on Puerto Ricans and children are limited, as are studies based on direct, extended observation. Despite any limitations, the existing research is informative and provides an overview of dietary intake patterns among Hispanic populations in the United States, while revealing differences among Hispanics, Blacks and Whites, as well as Hispanic subgroups.

Research has found there are differences in dietary intake between Blacks, Whites and Hispanics in foods consumed, (Patterson et al. 1995; Delapa et al. 1990), and the diet of Hispanics may have some beneficial aspects compared to Whites and Blacks (Patterson et al. 1995; Block and Subar 1992).

Comparative studies of Mexicans, Cubans and Puerto Ricans have shown there are differences in dietary intake within the Hispanic population as well (Loria et al. 1995; Chavez et al. 1994; Kuczmarski et al. 1995; Dewey et al. 1984). These studies have also revealed that the nutritional status of Hispanics falls below recommended levels.

Research has shown Hispanics may not be meeting nutritional recommendations (Ballew and Sugarman 1995), and fruit and vegetable intake among Puerto Ricans, as for

most of the U.S. population, is far below the recommended “five per day” (Kuczmarski et al. 1995).

Lack of knowledge and information on nutrition also affects the diet of Hispanics. Latinos have been found less likely than Whites to recognize foods that are sources of cholesterol and fat, and Puerto Ricans have been found to lack knowledge concerning the food guide pyramid, food labels and specialized topics such as “saturated fat” (Knapp et al. 1988; Perez-Escamilla et al. 2000).

Nutritional status may vary among age groups. Preschoolers may be getting closer to recommended food group intake than older children and adolescents, but still fall below recommended daily servings. Murphy et al. (1990) found mean dietary scores for children of all ages fell below recommended dietary scores.

#### Acculturation and Diet Among Puerto Ricans

Acculturation into U. S. society may be accompanied by changes in dietary patterns. The investigation of the role of acculturation and diet is important in the reduction of chronic diseases. The prevalence of diet related chronic diseases such as cancer, cardiovascular disease and gall bladder disease differ between Hispanics and non-Hispanics Whites (Council on Scientific Affairs, AMA 1991), but research suggests that the prevalence rates of Hispanics become more similar to those of non-Hispanics as they become acculturated into U. S. society (Kumanyika and Golden 1991). Length of time residing in the United States has been shown to be associated with dietary intake changes within Mexican and Puerto Rican populations. Furthermore, differences in food consumption patterns between Hispanic subgroups may be explained by differing patterns of acculturation to U. S. (Hazuda 1988; Chavez et al. 1994).

Changes in consumption patterns can be a result of exposure to new foods and eating patterns as the newcomer encounters the new culture at work, in school, at local supermarkets and restaurants, through the media, or through personal relationships. In Hartford, newcomers encounter and are influenced by an already multicultural city that includes African-Americans, European-Americans and Asians, as well as other Caribbean and Latin American immigrants.

Changes in diet and consumption patterns can also stem from environmental differences in the sending and receiving communities. The unavailability of traditional ethnic foods in the immigrant's new home, increased prices for traditional foods, or an inability to recreate a traditional cooking method, will force the immigrant to abandon some foods or traditional dishes.

Combined with the loss of traditional ethnic foods or dietary patterns, changes in intake may also be manifested as increased consumption of Euro-American food choices. In the Puerto Rican case, changes might include a decrease in the consumption of traditional staples such as rice and beans or *viandas*, or an increase in the consumption of a U. S. staple, such as potatoes. Puerto Ricans may start eating more fast food, convenience foods or restaurant food, or low-fat milk may replace whole milk.

The exact nature of dietary changes among Puerto Ricans is unique and difficult to decipher because of the colonial relationship the Island has with the United States. Puerto Ricans on the Island have been exposed to U. S. culture for many years, and the culture of food and eating on the Island has not escaped the impact. The majority of food in Puerto Rico has been imported from the United States for decades, and U. S. based business, including supermarkets and restaurants, are found throughout the Island. Furthermore,

U.S. culture and trends are brought to Puerto Rico by return migrants, Puerto Ricans visiting the Island, the media and by the tourist industry in Puerto Rico. When an Island-born Puerto Rican cooks a frozen dinner of fried chicken and mashed potatoes for their child, is this a result of the adoption a U.S. eating habit, or is she preparing a product that has been widely available in Puerto Rico for many years?

Past research has shown acculturation does seem to affect dietary intake patterns in terms of foods consumed, meal patterns and meal composition, and nutrient intake. Despite the close relationship the U. S. has with Puerto Rico, research thus far implies that Puerto Ricans do change their diets as a result of residence in the continental United States (Immink et al. 1983; Sanjur 1995). Differences in migration patterns have been shown to be associated with differences in dietary intake. For Puerto Ricans, changes in the composition of some meals are associated with increased length of residence in the United States (Sanjur 1995).

A comparison of Puerto Ricans in Puerto Rico and in the South Bronx revealed families on the mainland had a more varied diet, with higher intakes of fresh fruits, fruit juice, leafy, raw, and other vegetables, white bread, eggs and beef (Sanjur et al. 1986). Puerto Rican women in New York City also ate a more diverse breakfast than did women in Puerto Rico (Sanjur et al. 1986).

Dietary changes associated with acculturation can have positive or negative effects on nutritional status, depending what behaviors, foods, or patterns are lost or retained, or what new consumption patterns or foods are adopted. Thus far, some research on Mexican Americans and Puerto Ricans has implied that residence in the United States negatively impacts nutritional status (Marks et al. 1990; Chavez et al. 1994). For both

Mexican and Puerto Rican women, the consumption of vitamin A-rich and vitamin C-rich fruits and vegetables was found to be inversely proportional to length of U.S. residence (Dewey et al. 1984).

### Household Composition among Hispanics

#### Extended Family Households

The analysis of household composition among Hispanics has focused on both cultural and structural factors that affect household living patterns (Tienda and Angel 1982; Baca Zinn 1994, Vega 1995). In the cultural context, larger, extended households among Latinos have been explained as the result of cultural norms that encourage the incorporation of non-nuclear family members. In Puerto Rico and other parts of Latin America, unmarried children commonly remain in their parent's household and married children and their spouses may reside with their in-laws until they acquire sufficient funds to start their own households. Elderly relatives living with their children also creates extended family households.

Extension of households to include non-nuclear family members is also an economic strategy employed to combat economic hardship and poverty, and extended family households are more common among minority and female-headed households. Increasing the number of wage earners in the households can have positive effects on household income, and earnings of non-nuclear members in minority households have been found to be significantly and positively related to total household income (Angel and Tienda 1982). Women who had other adults living with them were more likely to participate in the labor force and to increase their work hours and work weeks (Figueroa 1991). Research in the Caribbean has shown that extended, three-generation households

often have the highest income among household types because of the large number of wage earners within the household (Safa 1995).

Furthermore, members of extended households can share domestic and household chores and childcare. This not only can lighten the domestic burden of all household members, but also enables household members to seek formal paid employment to increase household earnings. For female-headed families in particular, household extension can address the extreme limitations of money and time faced by single heads of households (Tienda and Angel 1982).

However, the structure of extended households is not uniform for all ethnic groups, and differences between ethnic groups can influence the level of benefit gained from household extension. Puerto Ricans have been found to be less likely to include economically active non-nuclear family members than non-Hispanic whites, reducing the economic benefits gained by adding wage earners into the household (Tienda and Angel 1982).

#### Female-headed Households

Family structure in the United States has changed significantly since the 1960's. While the incidence of the once dominant form of family structure, married couple families, has declined, the number of female-headed families have greatly increased. In 1960, 87.5% of all U. S. families were married couple families, while 10% were female-headed (U.S. Bureau of the Census 1960). By 1990, a little over 79% of families in the United States were married couple families, and over 16% of all families were female-headed (U.S. Bureau of the Census 1990).

There are racial and ethnic differences in the rates of female-headed households.

In the 1970's, the number of female headed households among Puerto Ricans increased at a rate which surpassed that of the U. S. national average (Cooney and Colon 1980). In 1980, 33% of Puerto Rican household were headed by women, compared to 8% for non-Hispanic Whites and 30% for African American households (Rodriguez 1991). In 1987, 45% of Puerto Rican women in New York City were single heads of household (Rosenberg 1991). In 1999, women headed approximately 15% of Hispanic households, compared to 6% of both non-Hispanic white and Asian households and 23% of Black households (U.S. Bureau of the Census).

Female-headed households have been criticized and condemned as a dysfunctional family form that perpetuates an underclass, strains the welfare system and functions as a source of juvenile delinquency. However, anthropologists have argued Eurocentric biases lend superiority to nuclear households over other types of households, and rather than being deviant, female-headed households are a legitimate family form that is rooted in the history of Latin America and the Caribbean (Safa 1999). Female-headed households arise from the dominant family ties between the female household head, her female kin, and her children. These ties are made stronger than the ties of male-female unions that are weakened by migration that separates families, less stable consensual unions rather than legal marriages, and men's increasing inability to financially support the household (Safa 1999).

There are also economic reasons for the rise of female-headed households. Women's increased labor force participation has made it easier for women to support their families, although at poverty levels for many. Government assistance, such as Aid to Families with Dependent Children (AFDC) and other transfer payments have also

contributed to the rise of female-headed households as single mothers can now support their own households without the aid of a male breadwinner (Safa 1995).

Increased male unemployment resulting from economic crisis and economic transformation in developing and industrialized countries also influences changes in household composition (Buvinic 1997). The inability of males to economically provide for their families may lead not only to the increasing economic contributions of women, but also to an increase in divorce or a decline in marriage. In the Spanish-speaking Caribbean, the increase in consensual unions and female-headed households is partially the result of the loss of male employment opportunities caused by the economic crisis and structural adjustment policies of the 1980's (Safa 1995). In the United States as well, the rise in female-headed households from 1960 to 1980 resulted both from urban-centered economic transformation and increased male unemployment (Johnston 1995).

#### Female headship and poverty

Despite income gained through labor force participation or transfer payments, female-headed households are often some of the poorest, due to the absence of a male wage earner, reduced job opportunities, and inequitable wages for women, and childcare responsibilities. Children under age six who live in female-headed households are particularly likely to be living in poverty. In 1997, of children under age six living in female-headed families, 59% percent were poor, compared with 10.6% of such children in married-couple families (AASA On line, <http://www.aasa.org/LN/lnews/8-26-98children.htm>).

Women who carry sole responsibility for household duties and childcare are severely limited in their access to formal sector employment. Informal sector activities,



which can be reconciled with domestic chores and family duties, are more accessible to female household heads, but do not provide consistent wages or any benefits associated with formal sector employment. Female-headed households also are comprised of a higher ratio of non-workers to workers than other types of households, increasing the burden of support for female household heads (Buvinic 1997).

The high rates of female household headship among Puerto Ricans have been cited as a determinant of the low family incomes of Puerto Ricans compared to other groups (Cooney and Colon 1980), and Puerto Rican female household heads are less likely to be in the labor force and are more dependent on public assistance payments than either African-American or White female household heads (Rodriguez 1991).

#### Migration and female-headship

Why is there such a prevalence of female-headed households among Puerto Ricans? Migration may play a role in the high rates of female-headship among immigrant groups (Buvinic 1997). While some argue recurrent Puerto Rican migration may contribute to marital instability and union dissolution (Muschkin and Myers 1985; Bean and Tienda 1987), others have suggested that migrants are more likely to have experienced marital disruption before migration to the mainland, i.e., selective migration is a factor in the high rates of female-headed families (Gurak et al. 1987). Women who were unmarried or had recently experienced a change in marital status have been found to be more likely to migrate from Puerto Rico than women who were continuously married (Ortiz 1996). Union type, specifically consensual unions, and the migration experience, may play a role in union dissolution. While consensual unions lack the social and legal barriers to dissolution of legal marriages, the migration experience reduces the social

integration that may enhance union stability (Landale 1995).

### Female-headed households and nutrition

The high poverty rates among female-headed households may affect their ability to purchase adequate amounts of food for their households, and past research has found female-headed households spend less per person for food than other households (Frazao 1993).

Although female household headship is often associated with poverty, lower socioeconomic status cannot be assumed to negatively impact nutritional status. Cross-cultural studies of childhood nutrition within female-headed families have found both negative and positive effects (Buvinic 1997). Studies among Latino households in the United States found urban female-headed households purchased more nutritionally adequate diets than did male-headed households (Sanjur 1995). Decreased food expenditure may be the result of a combination of budgeting strategies which include purchasing less food, purchasing a larger percentage of less expensive foods, a smaller percentage of costlier foods, e.g., convenience foods and restaurant food. Evidence suggests that lower income households are more efficient food shoppers and obtain more nutrients per dollar's worth of food than are those with higher incomes (Frazao 1993).

Gender differences as well may play a role in the relationship between household headship and nutritional status. Women have been shown to spend a greater percentage of their income on the family compared to male wage earners. For example, female wage earners in the Caribbean view their contribution to their household economy as the most important facet of wage labor (Safa 1995). This, coupled with the total control of household budget in the hands of the female household head, may mean women who head

their households may invest more on meeting the nutritional needs of their families than in households where household expenditures are negotiated with a male household head (Buvinic 1997).

### CHAPTER 3: METHODOLOGY

This project used an interdisciplinary approach, combining ethnographic methods, qualitative methods and dietary intake methods to study nutrition among Puerto Rican women and preschool children in Hartford, Connecticut. Surveys and semi-structured interviews were used to gather demographic and socioeconomic data on the study households. Food frequency questionnaires were used to gather data on consumption of specific foods, and dietary intake data was supplemented with direct observation of household dietary habits. Ethnographic, open-ended interviews and participant observation were utilized to explore consumption patterns before and after migration.

This ethnographic investigation was part of a larger study, funded by the USDA Food Stamp Program, aimed at gathering detailed data on dietary intake and eating behaviors of Puerto Rican preschool children (Perez-Escamilla et al., unpublished). For the portion size study, the child following method was used, meaning children were followed during all waking hours to record all food and drink intake (Wilson 1974; Eastwood Garcia et al. 1990). Researchers remained with the child from the time he or she woke until the evening for one or two full days. Gram weights of all food and drink consumed, at home or elsewhere, was recorded with the use of a portable electronic scale and printer. If the child consumed anything during the night, the caretaker kept track of this intake, and the missed food or drink was recreated, weighed and recorded into the day's data.

The extended hours involved in the child following method was easily partnered ethnography, the focus of this dissertation.

### Subjects

Respondents were all Puerto Ricans, either born in Puerto Rico or born on the mainland of Puerto Rican descent, who were the primary care takers of children between the ages of three and five. If more than one child within the desired age range lived in the household, the youngest child with the range of three to five years old was chosen for the study. All families were low-income, defined as receiving or eligible to receive food stamps. Twenty-two households were studied from April to November, 1997.

Potential participants were recruited through the Connecticut Family Nutrition Program (Ct-FNP), a collaboration between the Hispanic Health Council and the University of Connecticut at Storrs. Potential families were also recruited directly at two local elementary schools that served the primary Hispanic neighborhood of Hartford. Individuals with appropriately-aged children were approached and screened at the school, and were contacted later by phone or in person to finalize arrangements for their participation. Families were chosen where the primary caretaker and the child both stayed at home during the day, i.e., the primary caretaker was not employed outside the home and the child did not attend preschool. This enabled the comparison of similar children in one environment.

Although these recruitment methods did not provide a random sample, they were used because the commitment level of the participants and the safety of the environment for an extended research period, were given priority over a random sample. This was important because completion of the entire project required at least a two-day

commitment. By including families from other research projects, insight into the living situations of the family were known in advance, and situations with possible intervening variables were generally avoided. If problems arose during the study, e.g., domestic violence, drug abuse, or child abuse or neglect, the family was compensated for their participation thus far and they were dropped from the project.

Although the sample was not random, it did include a representative population that included Puerto Rico-born and mainland-born Puerto Ricans, caretakers of different age groups, varying household types, i.e., nuclear, female-headed and extended, and male and female children. All adult respondents were female, although this was not the original intention. However, because of gender roles, females were the primary caretakers of the children, as well as the primary consumers for the household.

#### Semi-Structured Interviews

After recruitment, potential families were contacted by phone or in person to set an appointment for the initial interview. This one-hour interview was conducted in English or Spanish according to the respondent's preference. All researchers were bilingual, with varying proficiency levels of English and Spanish. Interviewers gathered data on the adult caretakers, the study children and the households, including demographic data, nativity and migration patterns, household composition and household resources.

Table 3-1 shows items included on the semi-structured interview (See Appendix A for complete interview).

Table 3-1 Semi-structured Interview Variables

	Variable
Caretakers	Sex Age Education Marital Status Relationship to Study Child Nativity Age at Arrival* Total Length of Time in the U.S.* Other U.S. Residential Locations
Children	Sex Age
Households	Household composition Household resources
For all household members	Sex Age Occupation Relationship to study child

\*for Puerto Rico-born caretakers

#### Ethnicity/Acculturation Measure (EAM)

The initial interviews also included an ethnicity/acculturation instrument designed by the principal investigator specifically for this project (Appendix C).

This instrument addressed various dimensions of assimilation, including cultural assimilation, the change of cultural patterns, structural assimilation, the association with non-Hispanic society in personal relationships, and identification with the larger society, which were first presented by Gordon (1964). Other acculturation instruments were also researched, and several questions were adapted to the Puerto Rican context (Acculturation and Structural Assimilation Scale: San Antonio Heart Study, [http://riceinfo.rice.edu/projects/Hispanic Health/Acculturation.html](http://riceinfo.rice.edu/projects/Hispanic%20Health/Acculturation.html); Latino Ethnic Attitude Survey, <http://falcon.cc.ukans.edu/~droyf/>). Cultural variables included ethnic

self-identification, language use and ideology, popular culture, dietary patterns, traditional family patterns, and knowledge of and importance placed on Puerto Rican history, art, culture and customs. Social relationships were also explored to investigate the level of structural assimilation, including marriage, consensual unions, friendships and community composition. Political participation in U.S. and Puerto Rican politics were also included in the instrument (Table 3-2).

Respondents replied to over forty questions, which resulted in a score between +1, representing the highest level of ethnicity/lowest level of acculturation, to -1, representing the lowest level of ethnicity/highest level of acculturation. Answers that implied acculturation, for example a self-identification as “American”, speaking only English or living in a non-Hispanic neighborhood, received negative points. Similarly, positive points were assigned to answers implying lower levels of acculturation, e.g., speaking only Spanish, watching only Spanish-language television, or having only Hispanic friends. Each respondent’s total points were divided by the total number of questions answered, resulting in a score between +1 and -1.

Although the acculturation instrument designed for this project was intended to measure a range from negative one (-1), representing the lowest ethnicity measure/highest acculturation measure, to positive one (+1), representing the highest ethnicity measure/ lowest acculturation measure, all women interviewed scored in the positive range, i.e., between +.01 and +1.0.



Table 3-2 Ethnicity/Acculturation Measure (EAM) Variables

	Behaviors	Beliefs, Values, and Attitudes
Politics	Voting in U. S. or Puerto Rican elections.	Importance placed on personal participation in U. S. and Puerto Rican politics.
Social Relations	Ethnic composition of social relationships:	Attitudes concerning interaction and relationships with non-Puerto Ricans
	Endogamy/exogamy Ethnicity of friends	Endogamy and exogamy Comfort level outside Puerto Rican environment
	Ethnic composition of neighborhood and community organizations	
Ethnicity, Identity and Culture	Ethnic self identification	Importance placed on maintaining cultural heritage
	Knowledge of Puerto Rican customs, holidays, art, and history	Importance of ethnicity in defining personal identity
		Views on traditional family patterns and values.
		Psychological connections to Puerto Rico
Language	Caretakers' current language use	Level of desire for children to speak Spanish
	Primary household language	
	Caretakers' first language learned	Importance placed on Spanish language as an indicator of ethnic identity.
	Current English and Spanish proficiency	
Popular Culture	Preference for Spanish-language/Hispanic: Media (TV, radio and print) Music	
Dietary Patterns	Frequency of Consumption of traditional foods.	

However, in the testing phase, the acculturation instrument had been administered to thirteen male and female staff members of the Hispanic Health Council and several of their family members. This pilot sample resulted in a wider range of acculturation scores that encompassed much of the total possible range of  $-1.0$  to  $+1.0$ , i.e., a range from  $-.12$ , representing the most acculturated in the test sample, to  $+.75$ , representing the least acculturated. This implies despite the range of responses of the study sample, which ranged from  $+.09$ , representing the most acculturated of the study sample, to  $+.77$ , which represented the least acculturated on the women in the study sample, the study sample was less acculturated compared to other Puerto Ricans in Hartford.

Part of testing the ethnicity/acculturation instrument involved analysis through correlations with variables that logically should influence level of acculturation. These variables included age at arrival, length of time residing in the continental U.S., and English language proficiency. Results are illustrated in Table 3-3 below.

Table 3-3 Correlations of Ethnicity/Acculturation Measure, Age at Arrival, Length of Residence, and English Language Proficiency

	Ethnicity/ Acculturation Measure	Age at Arrival	Length of Residence (yrs.)	English Language Proficiency
Ethnicity/ Acculturation Measure	*	.759**	-.504*	-.789*
Age at Arrival	.759**	*	-.583**	-.729**
Length of Residence (yrs.)	-.504*	-.583**	*	.476
English Proficiency	-.789**	-.729**	.476	*

\* correlation is significant at the 0.01 level; \*\* correlation is significant at the 0.05 level

Respondents' acculturation scores were correlated with age at arrival, length of residence on the mainland, and English language proficiency. Analysis showed respondent's ethnicity/acculturation measure was positively and significantly correlated with age at arrival ( $r = .759$ ,  $p < .01$ ), i.e., as age of arrival increases, the ethnicity/acculturation measure increases towards the high ethnicity/low acculturation end of the scale. The ethnicity/acculturation measures and length of residence was negatively correlated ( $r = -.504$ ,  $p < .05$ ). This means as length of time residing on the mainland increases, the ethnicity/acculturation measure decreases towards the low ethnicity/high acculturation end of the scale.

Correlation between the ethnicity/acculturation measure and English language proficiency revealed a negative relationship ( $r = -.789$ ,  $p < .01$ ). This means as English language proficiency increases, ethnicity/acculturation measure decreases toward the low ethnicity/high acculturation end of the scale. Finally, age at arrival and English language proficiency were found to be negatively correlated ( $r = -.729$ ,  $p < .01$ ). This implies that as age at arrival increases, English language proficiency decreases.

### Dietary Intake Methods

#### Dietary Assessment and Culture

Nutritional anthropologists have questioned the validity of data collected when subjects are responding to dietary assessment instruments that are not appropriate to their culture (Pelto et al. 1989; Nichter and Nichter, eds. 1981). When instruments are designed without adequate cultural knowledge, misinterpretations and subsequent misinformation are inevitable.

Dietary assessment among ethnic populations must be culturally appropriate, i.e., the methods must address differences in diet from the mainstream population by including food choices of the target group. Ethnographic methods and the inclusion of members of the target group in the research team provided cultural knowledge. Furthermore, anthropological methods that view members of the culture groups as the experts will not only improve the relevancy of the instrument, but also brings the community into the research process.

The mutual understating of cultural knowledge between the interviewer and the respondent are especially important in tools such as food frequency questionnaires where respondents are self-reporting their dietary behavior. Both researcher and informant must be equally informed for reliable data to be acquired. Culturally specific assessment tools can decrease miscommunication and increase data accuracy. Teufel (1997) stresses the goal of creating culturally-specific dietary assessment methods is cultural competency, which implies not only an understanding of cultural knowledge, perspectives and behavior, but also an ability to use that understanding within the cultural context.

#### Food Frequency Questionnaires (FFQs)

Food frequency questionnaires are frequently used for dietary assessment, and have been shown in epidemiological studies to give an adequate reflection of usual dietary intakes of populations (Willett 1990). Food frequency questionnaires are lists of food items where the respondent is asked to report their average frequency of consumption over a specific time period. Although pre-created lists may limit responses, blank spaces and probing questions at the end of the questionnaire can compensate for format restrictions.

Food frequency questionnaires have several advantages over other dietary methods. They can be conducted in a short amount of time while looking at diet over a long period of time. Food frequency questionnaires can reduce data deficiencies of twenty-four hour recalls that investigate only one day's dietary intake.

How does the idea of cultural competency relate to food frequency questionnaires? Instruments that do not include cultural food choices in the core of the FFQ, but rather attempt to capture culturally-specific choices within general categories suggest that culturally specific foods are not as important to the researchers as other food choices. By not specifically including culturally specific foods in the FFQ, the respondent is forced to remember their intake of these food themselves, leading to under-reporting of consumption. Similarly, although a FFQ that includes a list of ethnic foods at the end of the form may reduce some recall problems, separating them from the core list of choices still implies they are not as important or are somehow inferior to more mainstream foods. Along with cultural considerations concerning the foods included in the FFQ, the entire structure of FFQs, most often based on the categorization of foods according to macronutrient content, e.g., proteins or carbohydrates, may not be appropriate for cultural groups with differing food categorization concepts (Teufel 1997).

Dietary intake methods in this project included a culturally appropriate FFQ developed by the Connecticut Family Nutrition Program (CT-FNP). All FFQs used by the CT-FNP include both traditional Puerto Rican and more mainstream, Euro-American food choices. These instruments were developed in conjunction with the community by teams that included Puerto Rican, bilingual researchers. The FFQs are bilingual, and were conducted in either English or Spanish, according to the respondent's choice. The

FFQ included almost 200 items of both Puerto Rican and American food and drink items (Table 3-4 through Table 3-8).

Respondents were asked how many times per day, week, month or year the study child consumed each item. If a respondent reported a range of frequency, for example two to three times a day, a mean frequency was recorded, e.g. 2.5 times per day. Respondents were probed for other items not included in the questionnaire at the end of each food category. All reported frequencies were converted into daily number of times consumed, and all FFQ data was analyzed with SPSS for Windows (Statistical Procedures for the Social Sciences).

Table 3-4 Food Frequency Questionnaire Items: Milk and Milk Products

Milk	Whole, 4% milk fat Low Fat, 1-2% milk fat Milk based drinks (milkshakes, flavored milk)
Cheese	American cheese, cream cheese
Yogurt	Plain and fruit flavored
Dairy Desserts	Ice cream, frozen yogurt

Table 3-5 Food Frequency Questionnaire Items: Meat and Other Protein

Beef	Steak, ground beef, oxtail
Poultry	Chicken, turkey
Pork	Chops, ribs, roast ( <i>pernil</i> ), other pig meats
Processed meats	Hot dogs, Cold cuts, Bacon, Sausages
Other Meats	Liver and organ meats, Rabbit
Fish	Salted cod fish, tuna fish, trout, salmon, sardines,
Shellfish	Oysters, shrimp, crab, lobster
Other Seafood	Octopus, Squid
Eggs	Boiled, fried or scrambled
Legumes	Beans, pigeon peas ( <i>gandules</i> ), peanuts, peanut butter
Mixed Dishes with Meat or Seafood	<i>Alcapurrias</i> (fried plantain dough stuffed with meat or seafood), <i>asopao</i> (rice soup made with chicken or seafood), <i>empanadillas</i> (fried dough pocket stuffed with meat or seafood), <i>mondongo</i> (tripe soup), <i>pasteles</i> (boiled plantain dough stuffed with meat), chili, chicken noodle soup, tacos

Table 3-6 Food Frequency Questionnaire Items: Vegetables

Carotenoid-rich	Carrot, pumpkin ( <i>calabaza</i> ), sweet potato, spinach, tomato
Vitamin C-rich	Broccoli, cabbage, cauliflower, green beans
Other vegetables	Celery, corn, cucumber, eggplant, lettuce, olives, avocado

Table 3-7 Food Frequency Questionnaire Items: Fruits and Fruit Juice

Carotenoid-rich	Apricot, mango, peach, melon, papaya
Vitamin C-rich	Orange, lemon, grapefruit, strawberry, watermelon, pineapple
Other fruits	Apple, banana, cherry, grape, coconut, plum, pear, guava ( <i>guayaba</i> ), soursop ( <i>guanabana</i> ), <i>quenepa</i> , tamarind
100% juice	Fresh, frozen or canned

Table 3-8 Food Frequency Questionnaire Items: Bread and other Carbohydrates

Bread	White, wheat, rolls, corn, biscuits, muffins, pancakes
Pasta	
Rice	White and yellow
Cereals	Hot and cold breakfast cereals
Tortillas	Flour and corn
Starchy vegetables	Potatoes, plantains, ( <i>malanga</i> ), yam ( <i>ñame</i> ), yucca, white sweet potato ( <i>batata</i> ), breadfruit ( <i>pana</i> )
Mixed dishes with rice or pasta	Yellow rice with meat, lasagna, pasta and tomato sauce and/or meat sauce, macaroni and cheese

### Qualitative Methods

#### Open-ended Interviews

During the interview phase of the study, in-depth, open-ended ethnographic interviews on dietary habits addressed changes in the respondent's diet over time, particularly looking at differences between pre- and post-migration dietary patterns (Appendix E). Generational differences in consumption patterns and nutritional

knowledge were also explored. All interviews were conducted in the respondent's preferred language, i.e., English or Spanish, and all were conducted in the respondent's home. All responses were tape recorded and fully transcribed. Spanish interviews were translated into English.

As part of the open-ended questions, respondents were asked several questions aimed at uncovering changes in diet over time, especially pre- and post -migration. Respondents were asked to describe typical breakfasts, lunches and dinners they ate in Puerto Rico and some typical meals that they consume now in the U. S. Several recall aids were used, including probing with connections to other life events (e.g., describe what foods they ate as children at home or in school, what kinds of foods family members made for them, what kinds of foods they make for their children), probing with classifications (e.g., favorite foods or food groups) and recall of recent events (e.g., meals eaten in the last few days).

Changes in diet over the respondent's life span were addressed , as well as changes in diet since migrating to the continental United States. Respondents were probed with questions on the use of specific foods or food groups (e.g., meat or fruit consumption ) changes in selecting foods, changes in cooking or other food preparation techniques, or changes in shopping behavior. Reasons and motivation for changes were also elicited.

Transcribed interview data was used to investigate diets of both adult caretakers and the study children. Coded concepts included "typical foods" for diets in Puerto Rico and in the U.S. Comparative lists of these foods were developed to analyze differences in



foods consumed by food group, as well as changes in meal composition. compare foods considered typical fare in Puerto Rico to foods considered typical fare in the U.S.

### Ethnography

Ethnography has been described by Spradley (1980) as “the work of describing a culture”. The central aim of ethnography is to understand another way of life from the native point of view. The goal of ethnography, as Malinowsky put it, is ‘to grasp the native’s point of view, his relation to life, to realize his vision of his world’. Fieldwork, then, involves the disciplined study of what the world is like to people who have learned to see, hear, speak, think, and act in ways that are different. Rather than studying people, ethnography means learning from people. (Spradley 1980:3).

Ethnography was developed to study small, non-Western societies, but its application has expanded to study complex societies as well. Complex societies are constructed of overlapping multicultural, heterogeneous groups. People do not share their culture with all the other members of their society, but rather are members of multiple layers of subgroups and subcultures.

It has become increasingly clear that people who live in modern, complex societies actually live by very different cultural codes. As people move from one cultural scene to another in complex societies, they employ different cultural rules. Ethnography offers one of the best ways to understand these complex features of modern life. (Spradley 1979:12).

Ethnographic research involves first hand observation, where the researcher integrates into the culture in order to gain an insider’s perspective and understanding. The goal of ethnographic inquiry is “to understand another way of life from the native

point of view” (1979:3), by making “inferences about what people know by listening carefully to what they say [and] by observing their behavior” (Spradley 1980:11).

This kind of participant observation obviously entails that the researcher become involved, to varying degrees, with the people being studied. Participant observation allows the researcher to study individuals’ behavior within “everyday” situations. It allows the researcher access to a comprehensive view of how individuals live, think, and function, thereby enabling a greater depth of understanding. By becoming involved in the culture on a personal level, often for an extended amount of time, anthropological methods put the researcher in a position to understand the culture from the “insider’s” perspective.

In this project, the principal investigator gained in-depth insight into a family’s lifestyle and daily activities by hearing family stories and histories, looking at photo albums, eating meals together, helping the children with their homework or helping them practice their English, taking the children to the playground, and meeting other family members and friends that came to visit. The personal nature of ethnography also provided a much-needed opportunity for a kind of community outreach. The families in this study often used the opportunity of the researchers’ presence to gain information for themselves on community services, health care providers, educational programs, day care options or job training. Only ethnographic methods result in such a level of inclusion and acceptance into the cultural milieu being studied.

Despite its benefits, participant observation also has some disadvantages. For one, the mere presence of the anthropologist means that the researcher is viewing a situation that is not the same as any other day, and her presence alone, no matter how

“natural” or inconspicuous, may cause changes in the subjects’ behavior. This may be a particular problem when studying children, whose natural curiosity and friendliness may focus them on the researcher.

To help counteract observer effects in this study, the initial interview was used as an opportunity for the children and other household members to grow comfortable with the researcher’s presence to reduce observer effects during the remaining study period.

## CHAPTER 4: FINDINGS

Puerto Ricans moving to Hartford, whether they are coming from Puerto Rico or other areas of the continental United States, confront and interact with new cultural contexts that influences their dietary patterns. Hartford has a diverse population that includes European-Americans and African-Americans, and Asian, Latin American, Caribbean and Brazilian immigrants. Living east of Park Street, Puerto Ricans confront the strong presence of Italian restaurants and bakeries, while Puerto Ricans in the North End interact with the African-American community and Afro-Caribbean immigrants. Puerto Ricans residing in West Hartford are part of a primarily European-American, middle and upper class suburban community that includes gourmet restaurants and markets that offer Indian, Mediterranean, or Japanese foods. Within the primarily Puerto Rican Park Street neighborhood as well, Hartford Puerto Ricans reside with immigrants from Asia and other areas of Latin America, and are in contact with American institutions, such as fast-food restaurants and diners.

In Hartford, Puerto Ricans had originally settled in the Clay Hill neighborhood in northern Hartford. Population growth and displacement by urban renewal programs in the North End initiated the expansion of Puerto Ricans to the South Green neighborhood, south of the downtown business and government district. By the end of the 1960's, Puerto Ricans had replaced European Jewish, Polish, Italian and Irish immigrants in these neighborhoods. In the 1970's, relocation of Puerto Ricans initiated by the city's

redevelopment moved Puerto Ricans into the Frog Hollow neighborhood. The disintegration of neighborhoods, the displacement, and the dispersion of Puerto Ricans led to the loss of neighborhood cohesion, economic resources, employment opportunities, community cultural identity and traditional family patterns (Glasser 1997). In the 1990's, the majority of Puerto Ricans still live in Frog Hollow, and all but two of the families in this project lived in this neighborhood.

Park Street is the main thoroughfare that intersects Frog Hollow. Park Street has been called the "most well-developed Latino commercial district in New England" (Glasser 1997). It contains many neighborhood businesses, such as beauty parlors, clothing, music, hardware and jewelry stores, a tattoo parlor, restaurants, *bodegas* and supermarkets. Park Street is also the home of banks, schools, the neighborhood McDonald's, and apartment buildings and houses. Social service organizations, including adult education organizations and a WIC office, are also located on Park Street. During the day, Park Street is busy and crowded with people and traffic: women walking their children in strollers, groups of elderly men smoking and talking, children walking to and from school and teenagers laughing and talking loudly. Informal economic activity also occurs on Park Street. In the summer months, street vendors sell snow cones (*piraguas*) and neatly peeled fresh oranges to pedestrians, as well as cassette tapes of traditional Puerto Rican *salsa*, *bachata* and *merengue*, and contemporary Latin artists.

The side streets off Park Street are primarily residential, containing houses, apartment buildings, parks and schools. Much of the housing on and around Park Street was built before 1920 and is in poor condition (Backstrand and Schensul 1982). Newer

buildings and homes are also available for those with sufficient economic resources to afford them.

Only three women interviewed lived outside the Park Street neighborhood. Luz and Maricely in Hartford's North End, an ethnically and racially mixed neighborhood just north of the city's downtown business district that includes predominantly African-American, Hispanic and Jamaican residents. One respondent, Vivian, lived with her son and her parents in the predominantly White, middle-class suburb of West Hartford.

### Food Availability in Inner City Hartford

#### Supermarkets

The food stores and markets available to Puerto Rican immigrants in the inner city affect their dietary patterns. Most large, chain supermarkets have moved to the suburbs of West Hartford, west of Hartford's inner city, and the smaller towns surrounding Hartford, areas that are easily reached only by car. Research in other northeaster U.S. cities as well shows low-income inner city neighborhoods have fewer and smaller supermarkets than middle and upper class neighborhoods, and offered little food variety (Green et al. 1991). Stores in New York City's low-income neighborhoods were more expensive, especially for fresh fruits and vegetables, and were less sanitary than stores in the more affluent neighborhoods (Green et al. 1991). Prices of bread, rice, meat, fish and *viandas* in the South Bronx were higher than in four comparative communities in Puerto Rico (Sanjur et al. 1986). Respondents reported they eat some foods less frequently or not at all because they are too expensive in Connecticut. Often these foods were relatively inexpensive staples in Puerto Rico, such as *viandas*, a mixture of boiled starchy root vegetables that are an important carbohydrate source in traditional

Puerto Rican cuisine. Irma reported, “I used to eat a lot codfish with oil, and *viandas*, but here I do not...here we make it once in a while because the *viandas* now come out to be expensive”. The climate of Connecticut also means there are seasonal fluctuations in prices for fresh fruits and vegetables, making certain foods out of reach for low-income shoppers during winter months.

Not only are there more food stores in the suburbs, but there are a wider variety of types of food stores, including supermarkets, discount food warehouses, farmer’s markets and small specialty stores. The supermarkets in the suburbs carry some Latino food, but mostly shelf items in a small Hispanic section like those found in the ethnic food sections of most large supermarkets today.

There are only two supermarkets within the Park Street neighborhood. The first is centrally located on a busy part of Park Street next to one of the local elementary schools. The other supermarket within the Hispanic neighborhood is located several miles from the main residential areas. This supermarket can be reached by bus, and although it is a long walk, some families do travel to this store on foot. The round trip can take several hours, and is further complicated if parents have to bring children with them.

The more accessible supermarket is called the *Mercado*. The *Mercado* is a multi-functional establishment divided into three main areas. First, is the food market. Although much smaller than large chain supermarkets found in the suburbs, it offers much more variety than the local *bodega*, especially concerning fresh produce. This small supermarket stocks both Hispanic and non-Hispanic foods, and offers a good supply of fresh foods and shelf items. Prices are also lower than the smaller

neighborhood *bodegas*, but are higher than some the larger or warehouse-style food stores in the city's suburbs.

The *Mercado* also includes a small retail sales area that includes a candy, cigarette and lottery stand, a jewelry vendor, a Latino music CD and cassette tape vendor, a sandwich and ice cream stand, and a travel agency.

The far side of the *Mercado* houses several cafeteria-style hot food stands that are always busy and crowded. The majority of customers are Latino, but non-Hispanics visit food vendors as well. The cafeteria-style vendors offer several types of Latin American cuisine, including Mexican, Colombian, Salvadoran, as well as Puerto Rican food.

Puerto Rican food vendors offer traditional staples such as white and yellow rice, pink beans, black beans, and *viandas* drizzled with olive oil and garlic. Available mixed dishes include chicken and rice (*arroz con pollo*), stewed chicken or codfish (*bacalao*), meat-filled pies (*empanadillas*), crispy fried or soft sweet plantains (*tostones* and *maduros*), and baked plantains stuffed with meat, fried chicken, pork chops, ribs and octopus salad (*ceviche*). Vendors also offer soup, bread and salad of iceberg lettuce, tomatoes, canned peas and corn.

Mexican food is offered in other food stands. Here customers can choose a chicken soup that comes packed with large chunks of potatoes and corn, and beef or chicken tacos and enchiladas. All foods are served with a large tray of accompaniments, including chopped onions, radishes, cilantro, limes wedges, and fresh salsa. A small Salvadoran pastry stand in the corner offers many baked goods.

The *Mercado* is always crowded with customers: women shopping for food, teenagers looking at CD's, men and women on their lunch hours from work, children



eating ice cream, groups of older men enjoying a traditional meal, and families planning trips to Puerto Rico at the travel agency. The central location and the multifunctional nature of the establishment make it a community meeting area where almost all neighborhood residents visit at some time. It is common to see and meet friends, family and acquaintances at the Mercado to shop or dine, and unplanned meetings are also common. The *Mercado* also attracts customers from outside the Hispanic community that come to eat Latin American and Caribbean food.

### Bodegas

The main thoroughfare of the Hispanic neighborhood has many small neighborhood food stores that sell traditional food products, prepared hot foods and non-Hispanic market items. *Bodegas* are convenient for Hartford's inner city residents, existing in numbers great enough that one is usually only a few block away. Much more than a suburban convenience store, *bodegas* are more like small supermarkets that carry fresh fruits, vegetables and meats, hot cooked foods to carry out, and fresh bread, as well as canned, dry and frozen foods. It is not uncommon for families to visit their local bodega several times a day, stopping by in the morning to purchase milk or bread in the afternoon, buying food for the evening meal, or buying a treat for their children.

*Bodegas* also provide Puerto Ricans in the U.S. access to medicinal herbs and botanicals that are unavailable in mainstream U.S. markets. These materials have been found to be used to treat ailments in children, such as diarrhea, fever, and teething (Lieberman 1979).

Although convenient and focused on the needs of the local Hispanic community, *bodegas* are more expensive than supermarkets, and have fewer food choices and are

especially limited in the fresh produce they carry. *Bodegas* are crowded and packed with food literally from floor to ceiling, but their small size limits the variety of foods are available, no matter how much store owners pack into the small quarters. Informants revealed local stores often raise their prices when AFDC payments are made, further taxing low-income household budgets.

### Restaurants

The streets of Frog Hollow have many restaurants, including fast-food restaurants, cafeterias, take out restaurants, and sit down restaurants. There are Latino restaurants (Puerto Rican, Colombian, Brazilian and Mexican), as well as Chinese restaurants, a diner and Italian restaurants. The Italian heritage of Franklin Avenue, east of Park Street, is evident in its many pizza parlors, restaurants and bakeries. This ethnic diversity in food choices in Hartford creates an intermingling and an exchange of culture as incoming Puerto Ricans meet the culture of Hartford. Puerto Ricans can try new foods that were not available to them in small towns in Puerto Rico, such as Mexican, Jamaican or Brazilian food, and in turn, they influence the city's culture by making Puerto Rican food part of the larger Hartford cuisine. Restaurants such as *Aquí Me Quedo* on Park Street are Hartford institutions frequented by Hispanics and non-Hispanics alike. Another example of the food culture exchange can be seen in Frog Hollow Chinese restaurants. The Hispanic presence is so strong in Hartford that even the Chinese restaurants offer a few Puerto Rican side dishes, such as *maduros* or *tostones*, to satisfy their Hispanic customers.

## The Subjects

### Adult Caretakers

#### Sex and age

All respondents were the primary caretakers of a preschool child who was between the ages of three and five. All the primary caretakers were female, and all but two were the mother of the study child; one respondent was the study child's aunt and one was the child's grandmother. The majority of respondents, over 68%, were between the ages of twenty and twenty-nine. Approximately 18% of respondents were in their thirties, and about 9% of respondents were in their forties. Ages ranged from 19 to 47 years old.

Table 4-1 Adult Female Caretakers Characteristics

Age (in years)	25.6 ± 7.5
Age range (in years)	19 – 47
	Percent
Mother of Study Child	91.0
Aunt of the Study Child	4.5
Grandmother of the Study Child	4.5
Less Than Eighth Grade Education	36.4
Some High School	22.7
High School Diploma or GED	31.8
Some College	9.1
Single	54.6
Married	13.6
Consensual Union	22.7
Separated or Divorced	9.1

#### Educational levels

Table 4-1 shows that more than 36% of women interviewed had less than an eighth grade education. Such low levels of formal education limit women's economic opportunities, and for monolingual Spanish speakers, barriers to advancement are even

greater. Twenty-three percent of respondents had some high school education, and almost one third were high school graduates. Less than 10% had attended college, and no one interviewed had a college degree.

Table 4-2 Correlations of Educational Level, Household Size and Ethnicity/Acculturation Measure

	Educational Level	Household Size	Ethnicity/Acculturation Measure (EAM)
Education Level	*	-.119	-.524*
Household Size	-.119	*	.354
Ethnicity/Acculturation Measure	-.524*	.354	*

\* significant at the .05 level

The relationship between educational level, ethnicity/acculturation and household size was investigated through bivariate correlation (Table 4-2). Educational level and household size were negatively correlated, though not significantly ( $r = -.119$ ). This implies household size decreases as educational level increases. Educational levels and the ethnicity/acculturation measure were significantly, positively correlated ( $r = -.524$ ,  $p < .05$ ). This means as educational levels increase, the ethnicity/acculturation measure decreases toward the low ethnicity/high acculturation end of the scale.

Although several informants were interested in returning to school, it is often difficult because of socioeconomic barriers such as the lack of childcare, lack of transportation or insufficient financial resources. Cultural barriers, such as language barriers, as well as psychological barriers, such as a fear, lack of confidence in succeeding or decreased motivation because of the difficulty of the situation are also barriers to advancing one's education. For older women who are the primary family and

domestic figures in the household, such as the woman who was raising her three children, aged nine to fifteen years old, as well as her four grandchildren, ranging in age five to eight years old, taking care of their families comes first, before any thoughts of continuing their education.

During this study, the researcher assisted one respondent in locating a local organization that offers free education and training in computers, medical assisting or office skills. Although it is not known if this woman pursued her interest, her bilingualism and high school diploma put her ahead of many of her cohorts.

Madeline, a teen mother of two sons, had worked two jobs and attended high school classes during the day and night in order to graduate. In order to earn her diploma, she moved in with her mother who assisted in childcare, and attended an educational program specifically for teen mothers. Because of her diligence, she proudly reported she finished high school only one year behind her former classmates. Madeline hopes to attend college in the future, and has a significant long-term goal of obtaining a graduate degree in psychology or sociology.

#### Marital status

As shown in Table 4–1, the majority of women interviewed, almost 55% were single, almost 23% were in consensual unions (living with their partners in the same household, but not legally married), and 14% were legally married. Less than 5% of women were separated or divorced. In this context, women who reported they were single, were legally unmarried at the time of the interview. However, although legally unmarried, some single women were or had been in relationships, ranging from casually dating several men, to long-term, ongoing monogamous relationships.

Therefore, these figures alone do not represent the more complex household situations found in this project. Questions of marital status and household composition are complicated because of the complexity of domestic patterns found. For some families, especially female-headed households, reliance on transfer payments as the primary means of support for themselves and their children, or at least a consistent source of funds, influence decisions of marriage. Avoiding legal marriage serves to protect families from the negative impact of decreased welfare payments caused by the addition of a potential wage earner into the household, irregardless of their spouses' employment status. Living together in consensual unions without being legally married allows women to continue to receive welfare payments in full, in addition to wages earned by herself or her partner. However, women and their partners must be diligent in concealing the presence of an adult male in the household if their welfare payments were to be protected.

#### Nativity and migration patterns

Table 4–3 shows over 90% of respondents were born in Puerto Rico, although some of the respondents came to the U.S. with their parent(s) at a very young age. Seventy-five percent of Puerto Rico-born respondents had first moved to the mainland when they were less than twenty years old; thirty percent were twelve years old or younger when they moved to the U.S. with their parents or other family members. Only two respondents were born in the continental U.S.; both of these women were born in Hartford.

Table 4-3 Caretaker Nativity, Migration Patterns and Language Use

Ethnicity/Acculturation Measures (EAMs)	
Age at First Arrival*	$42 \pm .19$
Years Since First Arrival*	$16.1 \pm 8.8$
	$10.0 \pm 8.0$
	Percent
Born in Puerto Rico	90.9
Born in the Continental U.S.	9.1
Spanish Interview	63.6
English Interview	36.4

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\*n = 20; those born in Puerto Rico

U.S. citizenship allows the free movement of Puerto Ricans to and from the Island, and almost sixty percent of all respondents had returned to Puerto Rico at least once since moving to the mainland. Most of these individuals, almost seventy percent had returned to Puerto Rico for a short visit, remaining on the Island for less than one month. Approximately 13% of respondents had traveled to the Island at least once since moving to the mainland, and had remained in Puerto Rico for at least six months.

Return trips to Puerto Rico occurred for several reasons. Familial commitments, such as taking care of an ill family member, or assisting in family members' migration from the island to the mainland, was one reason women had returned to Puerto Rico. Some women had returned to Puerto Rico for a special event or function, such as a wedding or funeral, while others had traveled to the Island to visit family and friends. Others had left Connecticut and returned to Puerto Rico because of health reasons. Marital or relationship problems and living arrangements or employment plans that did not come to pass also had caused women to return to Puerto Rico.

In turn, similar events, changes or problems that occur while women are in Puerto Rico impel return migration to Hartford. Frequent flights between Hartford and Puerto Rico and the lack of immigration barriers allow Puerto Ricans to return to the Island to

visit or assist friends and family, or to pursue economic opportunities. If plans or opportunities on Puerto Rico do not proceed according to plan, Puerto Ricans can easily return to the mainland.

Irma's migration history illustrates the back-and-forth pattern that occurs as changes in life cycle, or personal relationships or economic conditions impel individuals to migrate. Her story also shows how family ties influence migration and settlement patterns.

Irma was born in Aibonito, Puerto Rico, and came to the United States at the age of nineteen. She moved to New Jersey to join older sisters who had moved there earlier to pursue their education. She married while in New Jersey, but returned to her parents' home in Puerto Rico for two years when her marriage ended. After these two years with her parents, Irma returned once more to New Jersey in search of work. Because her economic situation was uncertain, she had chosen to leave her daughter in Puerto Rico with family members while she pursued economic opportunities in the U. S. After a year of working in New Jersey, she moved back to Aibonito to be with her daughter. Irma then remained in Puerto Rico for over eight years, until she was in her mid-thirties and her daughter was thirteen. She then moved back to the U. S. because of a better job opportunity in Hartford, where one of her sisters was now living. At the time of the interview, Irma did not plan to return to Puerto Rico in the near future. Her last trip to the Island had been to attend her father's funeral.

Financial constraints of low-income families limit their travel, and are especially overwhelming if more than one family member is migrating.



Aileen's story illustrates some of the financial constraints that limit migration, as well as the separation from family that is part of the migration experience. Aileen is the mother of five daughters. She had moved to Hartford with only her youngest daughter and her niece, leaving her other four children in Puerto Rico in the care of family members. Aileen had moved ahead to establish a household in Hartford, and then planned to have her daughters join her in Hartford when she could afford their airfare. At the time of the study, she had only been able to afford a two-bedroom apartment, which will be quite small for herself, her niece, and her five daughters. It had been nine months since she had seen her daughters, and was very anxious to be reunited with them. The separation was also emotionally trying for daughter, who could not fully understand why her sisters had not been living with them in Connecticut, or why her mother had waited so long to bring them to Hartford. After almost a year, Aileen and her boyfriend were able to afford the airfare to bring all her children to Connecticut. They had saved the money from his full-time job selling cars. Aileen expressed her gratitude to her boyfriend, and acknowledged she would never have been able to afford the four plane tickets she needed without his financial input.

### Ethnicity and acculturation

Ethnic self-identification. Twenty of the twenty-two women interviewed identified themselves as "Puerto Rican"; two respondents identified themselves as Hispanic. The ethnicity/acculturation measure for both women who identified themselves as Hispanic fell on the low ethnicity/high acculturation end of the scale (.09 and .20), and although both women were born in Puerto Rico, they had lived in Hartford for an extended period of time (at least seven years). These two women's identification

as Hispanic implies increased length of residence on the mainland and increased acculturation may be associated with a broadening identity that sets oneself in the wider context of the Hispanic population of the mainland United States.

Endogamy. Of the women who were in legal marriages or consensual unions at the time of interview, all but one had a Puerto Rican partner; this woman was married to a man of Indian descent from Trinidad and Tobago.

Language. The data on language use among this sample showed high rates of bilingualism, revealing both high rates of Spanish language retention after migration, as well as the use of English by immigrants and their children. Over 68% of the caretakers interviewed considered themselves bilingual, reporting current use of both English and Spanish, and almost one-third reported the use of both English and Spanish about equally in their households. Over 70% of those interviewed spoke English at least “well”, despite the fact that over 86% had learned to speak Spanish before English. Also, a little over 68% of respondents reported they can speak both English and Spanish.

Most respondents in this project, almost 60%, reported that Spanish was the primary language spoke in their households, while less than 10% spoke only English in their homes. Almost 32% of respondents were monolingual Spanish speakers.

Along with high rates of Spanish language use among Puerto Ricans, Puerto Ricans also show greater proficiency in English compared to other Hispanic groups. More New York City Puerto Ricans reported they speak English “well to very well” than did either Cubans or Mexicans, and fewer New York City Puerto Ricans reported they speak English “not well or not at all” compared to other Hispanics (Rodriguez 1991). Patterns are similar in this project. In this sample, 73% of women interviewed reported

they speak English “fluently”, “very well” or “well” ; a little over 27% reported that they spoke English “not well” or “not at all”. This level of English language fluency shows Puerto Rican immigrants to the United States Hartford have learned to speak English at a high rate, since over 86% of women studied were native Spanish speakers.

Many incoming immigrants are eager to learn the host country’s language in order to participate fully and comfortably in all aspects of their new environment, to communicate effectively with their children who are learning the host country’s language in school, or to increase their educational levels or employment opportunities.

Participant observation and ethnographic interviews revealed that respondents’ feel it is important to continue to speak Spanish to their children to lay a foundation of the language while their children are young. Because their children will inevitably learn English when they attend public school, the caretakers’ believe it is their duty to keep the knowledge of Spanish in their children’s lives.

For monolingual Spanish speakers, functioning outside of Hartford’s Hispanic community is difficult or impossible, and language barriers limit one’s educational and employment opportunities and access to community resources and social programs. Furthermore, lack of English language ability keeps individuals geographically and economically locked within the Hispanic community, unable to take full advantage of opportunities in the larger society of Hartford. Although their participation in the world outside of the Hispanic community may be limited, the Hispanic neighborhoods of Hartford allow incoming Puerto Ricans to immediately fit into an ethnic community where they can speak Spanish and function effectively in a somewhat familiar environment, surrounded by individuals like themselves. Businesses, churches, schools,

grocery stores and restaurants in the Hispanic community provide residents with many of their day-to-day needs, and allows newcomers the advantage of entering a familiar cultural environment where they are surrounded by other Puerto Ricans. However, larger institutions such as social organizations, welfare agencies and health care institutions often do not have sufficient numbers of Spanish-speaking staff to properly serve the Hispanic community.

Politics. Other research has shown ethnic identity has played a key role in the political consciousness of Puerto Ricans in Hartford. Politics of identity have been used to mobilize the Puerto Rican community to fight for equity and incorporation into the power structure of the city (Cruz 1998). The majority of women interviewed were involved in the politics of the United States. Almost 64% of women interviewed had voted in the most recent election, or would have voted if they had been able to.

### Study Child Characteristics

#### Sex and age

Table 4-4 shows the characteristics of the preschool children in the twenty-two households studied. This project targeted male and female preschool children between the ages of three and five years old (mean age = 3.4, standard deviation = .6). The majority of study children were three years old with the project studying an equal number of girls and boys (n=11).

Table 4-4 Study Child Characteristics

Age (in years)	3.4 $\pm$ .6
<hr/>	
	Percent
Male	50.0
Female	50.0
Born in Puerto Rico	13.6
Born in the continental U.S.	86.4

### Nativity and migration patterns

Table 4-4 shows that unlike the adult primary caretakers interviewed, the majority of children in this study, over 86%, were born in the continental U.S. There was also a greater variety in birthplace locations among U.S.-born children than among U.S.-born caretakers. Both adult caretakers who were born in the continental U.S. were born in Hartford, whereas U.S. born children had been born in Connecticut, New York and Pennsylvania. Over 13% of the study children were born in Puerto Rico.

### The Households

#### Size and Composition

Table 4-5 shows mean household size ranged from three to eleven persons (mean = 5.2; standard deviation = 1.9). Most households, 63%, had three to five household members; 55% had four persons residing in the household. Some households were larger: over 36% of households had more than six members, and almost 5% had more than nine household members.

Table 4-5 Household Size and Composition

Range in Household Size	3 – 11 persons
Number of Persons in Household	5.2 $\pm$ 1.9
	Percent
Nuclear Family	36.4
Female-headed*	40.9
Extended**	22.7

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\*includes female-headed and extended female headed households

\*\*includes extended family with female subhead and extended family households

Table 4-5 shows 36.4% of households were comprised of nuclear families, which included the mother and father (or stepfather) of the study child, the study child, and siblings of the study child. A little over 40% of households studied were defined as

female-headed or extended female-headed. Female-headed households contained the study child, his or her mother, and any siblings. The mother of the study child was the sole household head in these households. Extended female-headed households included the grandmother of the study child as well. Some mothers interviewed identified themselves as the household head, while others identified the grandmother as the household head.

Almost 23% of households were defined as extended. These included extended families with a female subhead, where the grandparents of the study child were the household heads, and the study child and his or her mother resided with the grandparents. Thus, these households consisted of a female-headed family (female sub-head and her children) residing with her parents (the study child's grandparents). Two households included extended families with a nuclear family core. In these families, the study child's parents were the household heads, and one or both of the child grandparents resided in the household as well.

### Living Standards

Although all households were defined as low-income, i.e., receiving or eligible to receive food stamps, there was great variety in household living standards. Living standards are affected by many factors, including household size and composition, labor force participation of household members, and the ratio of wage earners to total household size.

### Resources

As seen in Table 4-6, the majority of families, over 80%, had access to a phone, and all households had a television, despite level of financial security.

Table 4-6 Household Resources

Do you have access to a...?	Yes	No
Phone	81.8	18.2
Car	40.9	59.1
Television	100.0	0.0

While 60% of respondents said they “always” watch Spanish language television, 40% of respondents said they watch the Spanish media “sometimes” or “almost never”. To reach a Puerto Rican audience, a multilingual campaign is key.

Lack of transportation was a critical issue for the majority of households studied. More than half of the women interviewed reported they do not have access to a car. Although there is a citywide bus system in Hartford that serves the inner city and its suburbs, traveling on the bus with children or in the winter is a time-consuming and difficult chore. Traveling to acquire food for the household is especially bothersome without a car. Household caretakers can only purchase as much food as they can carry, which is limited when women are also trying to manage children, infants, strollers, and packages. If household members purchase food by walking to the local small neighborhood *bodegas*, again, they can only purchase what they can carry. Limitations of carrying food home force some to purchase food for a meal or two at a time, making walking to the store a task that occurs at least once a day. Women who are single parents or for those without social networks must take their children with them each time they go to the store, making the trip longer than if the parent could go alone. Cold Connecticut winters only serve to make the chore more uncomfortable for adults and children alike.

#### The Informal Sector

A little over 18% of respondents participated in informal sector work to supplement household income. Observed informal activities included babysitting for

friends or neighbors, cooking, and selling arts and crafts objects. One ambitious family was constructing a ceramics studio in their back yard to offer classes and sell products.

Informal sector activities also offer informants' male partners opportunities and access to income when formal sector employment is unavailable or inconsistent. Earning income outside the formal sector also does not jeopardize their partners' welfare payments, allowing them to pool resources with their partners and increase household income. Elena's partner's story illustrates how informal sector work can supplement household income in the absence of formal wage labor. Although her partner did not have a job in the formal sector at the time of the present research, he did have many sources of informal income. In just a few days, he was observed performing maintenance and janitorial duties in his apartment building and around the neighborhood, performing mechanical work on neighbors' cars, babysitting and running errands for friends and family to gain income for the household.

#### Women, Infants and Children Program (WIC)

The Women, Infants and Children Program (WIC), funded by the U.S. Department of Agriculture helps support the nutritional needs of low income pregnant, postpartum, and breastfeeding women and children up to five years old. The WIC Program provides nutrition information and education, nutrition counseling and food assistance. Eligibility depends on household income and assessed nutritional need. WIC provides monthly food checks that can be used to purchase only specific foods, such as eggs, milk, beans, carrots, tuna fish, cheese, juice, cereal, peanut butter and infant formula. The majority of women interviewed, 72.7%, were participating in the WIC Program at the time of the research.



### Household Type and Diet

#### Meals and Snacks

Table 4-7 shows the total number of meals and snacks consumed by the study children in two days of observation. Several conclusions can be drawn concerning similarities and differences between household types.

Table 4-7 Children's Consumption of Meals and Snacks per Day

	Number of Meals, Day 1	Number of Meals, Day 2	Number of Snacks, Day 1	Number of Snacks, Day 2
Nuclear Family Households	2.50	2.50	8.83	5.75
Female-headed Households*	2.71	2.67	6.00	5.50
Extended Family Households**	2.25	2.68	1.25	6.10

\*includes female-headed and extended female headed households

\*\*includes extended family with female subhead and extended family households

First, the data reveal similar patterns in number of meals consumed across the three household types, with household consuming an average of 2.25 to 2.71 times per day. The data show, in terms of number of meals consumed per day, poorer female-headed households are similar to the other household types in providing meals for their children.

Second, average number of snacks differed between households on day one of observation. Children in extended family households consumed almost twice as many snacks as children in female-headed households, 11.25 compared to 6.0, and more than children in nuclear family households.

Participant observation revealed why children in extended households were consuming a higher number of snacks. Observation within extended households showed that members of extended household members all take some responsibility, to a greater or lesser degree, for the care of the children in the household. Tasks performed range from intensive full-time babysitting, perhaps taken on by the children's grandmother or aunt, to lighter tasks, such as taking children to school or to the doctor. Part of this care includes feeding the children of the household. Again, while the primary caretaker of the child may supply most of the food for the children, others in the household may feed the child to a lesser degree, perhaps by taking them out to eat on occasion, or purchasing snacks for them when they are performing other tasks outside the house. For households with several adult members who are coming and going throughout the day, snacks purchased by each adult in each trip away from home add up over time. The problem with this pattern is the kinds of foods that are purchased for children. Because these purchases are aimed to be treats, not a nutritionally important part of the child's diet, most of these snacks are high fat foods such as potato chips, and ice cream, or high sugar foods, such as cookies or candy.

The difference in the average number of snacks consumed on day two also points to an important factor of diet for all households: the great daily variation that occurs in diet. Participant observation revealed the multitude of factors that affect daily food choices. Factors from the household's financial standing, the family's daily schedule, the time of year, the health of household members, the addition or loss of a household member, and even the weather all affect food availability and choice.

## Food Groups

Table 4-8 shows the average number of times per day the study children consumed foods from the fruit, vegetable, bread, meat, and dairy food groups. Table 4-9 shows the number of foods children eat, in total, from the fruit, vegetable, bread, meat, and dairy food groups. The data reveal several differences between household types.

Table 4-8 Children's Consumption: Number of Times Consumed per Day

	Fruit	Vegetables	Bread	Meat	Dairy
Nuclear Family Households	4.93	4.31	4.98	5.11	6.74
Female-headed Households*	1.61	2.37	4.59	2.29	7.56
Extended Family Households**	4.04	2.56	4.84	2.90	4.46

\*includes female-headed and extended female headed households

\*\*includes extended with female subhead and extended family households

Table 4-9 Children's Consumption: Number of Kinds of Foods Consumed

	Fruit	Vegetables	Bread	Meat	Dairy
Nuclear Family Households	11.1	11.38	8.25	9.75	5.38
Female-headed Households*	7.66	7.22	8.44	8.44	5.22
Extended Family Households	10.40	9.40	7.40	9.20	4.80

\*\*

\*includes female-headed and extended female headed households

\*\*includes extended with female subhead and extended family households

First, there are differences between households in children's fruit consumption. While children in nuclear and extended family households consumed fruit more than four times per day (4.93 and 4.04 times respectively), children in female-headed households consumed fruit only an average of 1.6 per day. Children in female-headed households also consume fewer kinds of fruits than children in extended or nuclear family households (Table 4-9). These differences may be due to economic constraints of

female-headed households that limit their purchase of fruits, especially for women without transportation who cannot take advantage of the lower prices for fresh fruits in the larger suburban supermarkets. The decreased variety of fruits available in inner-city *bodegas* and markets compared to the larger supermarkets may also explain the decreased variety of fruits in female-headed households. Nuclear families with an employed household head or extended family households with several wage earners not only had increased income to invest in food and personal transportation, but also the interaction of individuals in the wider social context of their community meant larger social networks that can be called upon for access to transportation. Therefore, female heads may have to rely more heavily on the local, smaller markets that are within walking distance of their homes.

Vegetable consumption and meat consumption was highest among nuclear family households, and their prevalence in these households may be interrelated. Increased household income from the labor force participation of the male household heads in nuclear families may be responsible for increased meat consumption in nuclear family households. However, participation observation revealed the higher meat and vegetable consumption might also be the result of differences in meal composition and meal planning between households.

Formal wage labor for male household heads in nuclear households affected the timing and composition of meals. During the workweek, meal times for the entire household were scheduled to coincide with the mealtime of the working household head, structuring the family's eating habits around the work schedule. In Madeline's household for example, she would prepare breakfast for her husband before he left for work, then

would feed the children after he left. She would eat with her children, but more often would skip breakfast herself. If her husband were coming home for lunch, she would feed lunch to her children at the same time. If not, she would prepare lunch for herself and her children when she or they became hungry. Dinner was prepared to coincide with her partner's return from work, although she would feed the children first if they were hungry before their (step) father came home.

Meal composition also was affected by this more precise schedule of eating. Because women in nuclear families were planning specific, somewhat scheduled breakfasts, lunches and dinners to provide the meals for their partners and their children, meals tended to more complete, including foods from several food groups. Thus, planned meals would include meat, served with rice, beans or other vegetables. These planned meals, served five times a week, may account for the higher rates of meat and vegetable consumption seen among nuclear families. These patterns may also be the cause of the greater variety in vegetable consumption seen in nuclear family households (Table 4-15).

In contrast, eating patterns in female-headed and extended families could be less scheduled and more free flowing, because the schedules of the household members were more flexible. Female household heads could make meals that need only please themselves or their children. For members of extended households, increased numbers of adults and children mean a more complex pattern of food preferences and eating schedules. While large planned meals that include all household members do occur, it is more common for adults and children to eat at the times that best meets their needs. This results in a more dynamic, freeform, ongoing cycle of shopping, cooking and eating that contrasted with the three-meals-a-day regimen seen in nuclear households.

On the weekends, when the entire family is at home and on their own schedule, eating schedules and meal composition among nuclear family is more fluid and unplanned, more closely resembling female-headed and extended family household patterns. Meals may be eaten in restaurants, on the go at relatives, or skipped altogether. This contrasts with the family's eating habits during the week, when meals are prepared and eaten at home, on a generally planned time schedule.

Lastly, Table 4-8 shows children in female-headed households consumed more dairy foods per day compared to children in nuclear or extended family households (7.56 times per day, compared to 6.74 for nuclear households and 4.46 for extended family households). Participant observation revealed this may be a result of female household heads using milk as a snack food more than caretakers in other households. Milk served plain, sweetened with sugar or chocolate, or flavored and blended with ice pleases children's tastes and makes a filling snack, especially if a few crackers or a piece of bread is added. The use of milk as a snack is less expensive and more healthful than soda or sugary soft drinks.

### Nuclear Families

Nuclear family households are comprised of a mother, father and their children. The more complex household patterns found in this study dictated that the traditional understanding of a nuclear household, where the parents are legally married and are the biological parents of all the study children, applied to only some of the households in this study. However, other families were in essence functioning as nuclear households, although the parents were in non-legal consensual unions instead of legal marriages, or

the husband or male partner was not the biological father of all the children in the household.

Using this expanded definition, a little over 40% of households in this study were comprised of nuclear families that included the mother of the study child, her husband or male partner, and all her dependent children.

Several families in this project illustrate the vulnerability of nuclear families in this project faced because of their primary reliance on a single wage earner. Irma's husband, Terrence, worked full-time in a local bakery. Although Irma had participated in paid employment in the past, she presently does not work outside the home because her daughter is not yet attending school. Irma participates in some informal sector activities, including taking care of a neighbor's daughter before and after school. Irma also receives welfare payments and food stamps for the household. Her husband's position at the bakery also affords the family access to free baked goods on a daily basis. Irma's small family size, access to several sources of steady household income from formal and informal means, and receipt of transfer payments meant Irma and her family were faring better economically compared to other households studied.

However, unplanned events can quickly alter the family's situation. For nuclear families with young children that usually have only one adult income earner, a loss of this one source of financial support can have even more severe impacts than in an extended household with several adult wage earners. Irma and her family faced a serious situation when her partner lost several weeks of work because of a severe leg injury caused by a loose window in their apartment. Weeks of recovery from his injury meant the loss of income for the household, compounded with medical bills. Terrence is uninsured

because the cost of medical insurance available through his place of employment was too expensive compared to his wages.

Another nuclear family observed underwent a severe change that seriously affected the psychological and economic stability of the family. Wilmarie, twenty-five years old, lived with her husband, two sons and two daughters in a large three-bedroom apartment. Her husband, Hector, is thirteen years older than she is, and he was extremely important in caring for the household and children. During the study period, he was observed cooking meals for the adults and children of the house, and cleaning the house or balcony area. During the research period, Hector was arrested for drinking alcohol in public, i.e., a violation of Hartford's open container violation. Because he had legal problems in the past that were connected to alcoholism and drug abuse, he was sentenced to several years in jail. Literally, from one day to the next, the children were separated from their father, Wilmarie lost her husband and the family lost a caretaker. The children were frightened by their father's sudden disappearance and were confused to what had exactly occurred, and Wilmarie was upset and unsure what the future held for them.

Even among nuclear households, household size varies and some can be quite large. While Irma and Terrence's three-person family was one of the smallest studied, Maribel and Luis eight-person nuclear family household was one of the largest of any household type studied. Maribel and Luis had six children together, aged two months to nine years at the time of the study. One child, Miguel, was mentally and physically handicapped because of lead exposure, and several of the children suffered from asthma and allergies. Maribel took care of their six children with her husband Luis, while he was



looking for formal sector employment. His lack of English ability, lack of transportation and limited education made it difficult for him to get a job. Luis's past employment had been in construction and carpentry, but back problems have limited his physical abilities and his employment prospects.

While he was looking for a full-time job, Luis played an important role in childcare and domestic labor. He was the primary caretaker of their baby daughter, and was observed by her side almost constantly. In nuclear families, the two adult parents must be responsible for all financial resources and domestic labor. Luis' unemployment stressed the financial stability of the family, but his presence at home gave Maribel help in the difficult job of taking care of their six children.

### Female-Headed Families

#### Hispanic female-headed households in Hartford

The rate of female-headed households among Hartford Hispanics surpasses the national average, and is higher than the rates of both White and Black households: 47% or Hispanic households, compared to 13% for Whites and 38% for Blacks (U.S. Bureau of the Census 1990). Female headed households and extended female-headed household accounted for 41% of the households studied in this project.

Female heads of household have the sole or primary responsibility for supplying the financial needs of the family, meeting the social and psychological needs of their children, and performing daily household chores. Single mothers that are recent arrivals to Hartford often have left family and friends behind in Puerto Rico. These women have little or no social support networks in the United States, leaving them completely alone to care for their children in a precarious economic position and in a new and unfamiliar

environment. Linguistic barriers further complicate the situation of monolingual Spanish speakers. One woman's story illustrates some of the obstacles faced by female heads of household.

Evelyn is the twenty-two year old single mother of two young girls, and a baby boy. Evelyn is solely responsible for the economic survival of her family, and was unemployed at the time of the study. Evelyn's mother does not live in Hartford, and she has never known her father. She has no close friends in Hartford, and there was friction between her and her neighbors. Evelyn was isolated with her children, with no one to look to for economic, social or psychological support. At the time of the study, Evelyn was living in a nice two-bedroom apartment, but it was already crowded for her growing family. To make room for her baby son, Evelyn had created a small bedroom for her daughter in a walk-in closet in one of the bedrooms. Evelyn shared the other bedroom with her other daughter, but more often slept in the living room to gain some privacy.

Evelyn and her children relied solely on welfare payments and food stamps in 1997. Evelyn has a high school diploma and had been employed when her younger daughter was old enough to stay with a neighbor and her older daughter went to school. She was forced to leave her job, however, when her youngest son was born. He needed full-time care, and Evelyn could not afford day care for her three children. Childcare for her baby son was particularly costly and difficult to find. Evelyn had been able to acquire childcare for her daughter at little or no cost, but with a new baby, this arrangement had ended. Although her position in a fast food restaurant had been relatively low paying, she missed the extra income she had been able to make while still being eligible for food stamps and other health and social assistance programs.

Since the end of her formal employment, Evelyn and her family's only source of financial support has been government assistance in the form of welfare payments and food stamps. Evelyn receives a stipend for food for the month, but inevitably, these funds are not sufficient to last throughout the month. Her household's financial and food security waxes and wanes in a pattern that coincides with the monthly cycle of transfer payments. Food security has been defined as "access by all people at all times to enough food for an active, healthy life, and includes at a minimum: a) the ready availability of nutritionally adequate and safe foods, and b) the assured ability to acquire acceptable ways (e.g., without resorting to emergency food supplies, scavenging, stealing and other coping strategies). Food insecurity exists whenever the availability of nutritionally adequate foods in socially acceptable ways is limited or uncertain" (Anderson 1990:1560).

Unlike other households where wage labor and/or participation in the informal sector brings money into the household throughout the month, Evelyn's total monthly budget arrives at the beginning of the month and must be carefully budgeted. When AFDC payments and food stamps are distributed at the beginning of the month, Evelyn can purchase food to last two to three weeks, but despite her careful planning, her household food supplies are thin as the month advances and AFDC payments and food stamps dwindle. Throughout the month, Evelyn carefully watches the household's food supplies, and she always has a clear and precise picture of how much money and food supplies she has, and how long they need to last. She is adamant, however, to not let her children know that she worries about their food security, and she does her best to smooth the impact in times of food scarcity.

Evelyn must employ various survival strategies to stretch food supplies and maximize household resources. Evelyn rations food by carefully planning the composition of each meal, as well as the total amount of food allotted for each day. Evelyn usually feeds her children first, and then feeds herself from what food remains. When food is very scarce, Evelyn may skip meals so food supplies can last longer. Evelyn also relies on less expensive staple and simple foods to keep costs low, especially at the end of the month. Restaurant food or more expensive snack or convenience foods can only be purchased when monthly finances first arrive, but even then, their use must be extremely limited.

Evelyn knows her family's diet suffers and consumption patterns are altered because of food scarcity. When more food is available, her eldest daughter eats greater quantities of food and often helps herself to food and drink. "She would be going in the refrigerator on her own", as Evelyn put it. In contrast, when food supplies are diminished, Evelyn exerts more control over what the children eat, and gives out food in portions and meals that she has planned. Direct observation of the household's daily diet during a time of food scarcity showed that although at times the household may have less food than other households, Evelyn's careful planning resulted in meals for her children that contained more nutritious foods, such as oatmeal, rice and beans, fresh fruit and green vegetables, than other households that could afford to purchase more expensive, but often less healthful, foods. Her planning also resulted in well-rounded meals that included a variety of foods. However, as mentioned earlier, her children are eating less than they would like to eat, and Evelyn sometimes skips meals to make food last longer.

Along with the physical impact food insecurity and a limited food supply have on families like Evelyn's, there are also psychological problems associated with living with hunger and food insecurity. Discussions with Evelyn revealed as a parent, she wants to be able to provide not only what her children need, but also what they want. The media and interaction with friends and neighbors influences children to desire snack foods, convenience foods and trips to the local fast food restaurant. Such things are costly and do not fit into food stamp budgets. Evelyn revealed she feels guilty because she cannot provide treats for her family, or only in extremely limited supplies. Although her children are still young, discussion with the oldest child, only five years old, revealed she is starting to understand why her mother is careful with their food and cannot always buy her the treats she wants.

The guilt and feelings of deprivation associated with not being able to provide children the foods they want or in the amount they desire can affect how resources are allotted when they are available. Living through several weeks of the month worrying about food, explaining to your children why they can not have the treats they desire, or rationing food to make it last until the next monthly payment arrives causes caretakers to want to "make up for it" when resources are available. Parents and caretakers then purchase expensive snack foods or go to restaurants at the beginning of the month when financial resources are arrive, but this threatens the household food security in the weeks to come. This initial overspending further taxes the already insufficient funds that are meant to last several more weeks, thus restarting the monthly cycle of waxing and waning resources.

### Loss of social networks

Participant observation and discussions with female heads of household, especially those whose family still resides in Puerto Rico, revealed women in Hartford often feel socially isolated and detached from social networks. Women who migrated alone with their children, or whose family or partners have returned to Puerto Rico, said it is difficult for them to make social connections in Hartford for several reasons. First, their sole responsibility in the care of their children leaves little time to explore personal relationships. One woman reported the time spent with other women dropping off and picking up her children at school is the often the only time she spends with other adults.

Women from small cities and towns in Puerto Rico reported social interaction with friends and neighbors at backyard fences, garden gates, the market, the local restaurant or the town square was common and part of daily routine. In contrast, the large population in Hartford, safety concerns of the inner city, and the compartmentalization of families into apartment buildings with little or no common space serve to separated families and keep each isolated within their households. These factors, coupled with cold winters, keep families inside their households to a greater degree than in smaller towns in Puerto Rico. Thus, it is difficult for women to meet and network with other members of their community.

The shrinking of social networks affects dietary patterns. Family meals and get-togethers, holiday events and special occasion celebrations have become smaller, or non-existent, because of family separation. Women who lack friends or family members living in the area have stopped making some foods because they do not have visitors to inspire them to cook. Aileen reported, "There (in Puerto Rico), most of what I gave

visitors is white rice and stewed chicken, and *funche* (a cornmeal dish). Now, I never make it here (in the U. S.). Now I do not have many visitors." Along with the lack of desire or motivation to create large traditional meals when there are few family members or friends to eat with, some foods have been abandoned because they are labor intensive and require several individuals to efficiently prepare them. Furthermore, because these foods are labor intensive, they are usually prepared in large quantities and frozen so they do not have to be prepared often. One such food, *pasteles* (boiled plantain dough patties stuffed with spiced a spiced pork filling). For most informants, the consumption of *pasteles* has been restricted to a once a year, Christmas-time treat, when local stores prepare large quantities and sell them.

#### Extended female-headed households

Extended female-headed households consisted of the study child, his or her mother, and his or her grandmother. Depending on their age, family, and/or economic situation, siblings of some of the mothers were household members as well. Extending households to include the grandmother can provide increased assistance with childcare and the domestic sphere, or increased income if these women are participating in the labor force.

#### Sister-based households

One female-headed household consisted of sisters and their children sharing a single household. These households are comprised of two or more female-headed families sharing economic obligations, financial resources, childcare and domestic chores and duties. By pooling resources and sharing household bills, these families can maximize limited resources.

Daisy's household was an example of a sister-based household. By sharing a household with her sister, they were able to afford a larger apartment in a better neighborhood than either could have managed on their own. Furthermore, by sharing economic and household responsibilities, they can pursue educational or employment opportunities. Daisy planned to assume the duties of household and childcare first, because she needed to care for her new baby, only ten days old at the time of the study. At the same time, her sister was applying to attend a local trade school. When her sister finished school and her children were older, Daisy then planned to pursue her education.

Unfortunately, extended participant observation could not be arranged with Daisy's household during the study period. Caring for her baby and her other children, while assisting with her sister's family, meant she had little time for other activities, including participation in this research project.

### Extended Families

#### Extended Families with female subhead

Some three-generation households consisted of a female-headed family, i.e., female sub-head and her children, residing with her parents, i.e., the study child's grandparents.

Several households in this project illustrate this type of household. Luz is a twenty-year old single mother of one four-year-old son, Roberto. Luz and her son live with Luz's parents in a three-bedroom apartment in Hartford's North End. Both of Luz's parents work full-time to support the household, and Luz stays at home to care for her son and most of the daily domestic chores. Furthermore, because Luz's sister lives in the



same building and can assist with childcare, Luz had begun working part-time in her mother's place of employment.

Vivian was nineteen at the time of the study, the mother of a three-year-old boy. Vivian lived with her parents in a large apartment in West Hartford. Like Luz, both of Vivian's parents worked full-time, while Vivian stayed home to care for her son and the household. Vivian was married, but her husband was unable to be with the family because he was finishing the last year of a prison sentence. Vivian and her boyfriend were planning to move into a residence of their own upon her husband's release.

Maricely and her two sons lived with her mother and brother in the North End. At only twenty-two years old, Maricely was already divorced from her children's father, and was in a new relationship. Maricely's situation differed from those who freely chose to reside with their parents. In her case, because her mother had custody of her children, she had to live with her mother if she wanted to be with her children.

Maricely had lost custody of her children a few months earlier. While living alone with her children, she left them home sleeping, locked in their apartment, while she quickly ran to the corner store to purchase a few household supplies she and her children needed. Her current boyfriend's mother saw her leave her apartment without her children, and immediately contacted the police. When Maricely returned just a few minutes later, she was met by the police and investigators from the Department of Children and Families. Maricely subsequently lost custody of her children, but was fortunate in that her mother assumed the custodial role. Therefore, her children were able to live with family members and remain close to their mother. Maricely then moved back into her mother's household as well to be with her children.

Maricely was extremely grateful to her mother for her role in protecting her children and keeping them home. However, like many women interviewed, her future was uncertain. Although she desired and planned to live with her boyfriend and her children in a separate household from her mother, the loss of custody of her children, her boyfriend's incarceration, and her financial instability made these plans uncertain at best.

Respondents reported the presence of a grandparent generation in the household can affect the diet of the household in several ways. First, the diet of older household members rely more on staple foods, and a wider array of staple foods, than their children's diets. The parental generation, many of whom were raised in the continental states, rely on canned, frozen and processed foods for daily food preparation, as well relying on take-out and delivery of prepared foods for entire meals or to supplement other foods prepared at home. Subsequently, typical foods for these household members may include frozen TV dinners, Chinese take-out, or delivered pizza. On the other hand, their parent's core diet is more likely to include fresh, staple foods prepared at home. Meals are comprised of a variety of staple foods, including chicken, beef, pork, fish, seafood, beans, vegetables, fruits, rice, *viandas* and traditional spices, such as *achiote* and *sofrito*.

Similar patterns were observed in terms of snack foods. While parents would eat and give their children snacks such as processed meats and cheeses, potato chips or cookies, grandparents would snack on and offer unsalted crackers with butter, a sliced orange or apple, or a piece of French bread.

Some foods consumed by older household members were unfamiliar to younger household members, and while some were enjoyed and accepted by all, other less common foods, such as rabbit, pig's feet, or blood sausage were looked at with disdain by

younger household members. Some parents flatly refused to eat them and would not offer them to their children. One young mother remarked, "I would not do that to them," implying she would never expect her children to eat such foods. However, observation in households where a wide variety of foods was commonly offered to children revealed that children would accept and enjoy many different foods. Although not all new foods were accepted by their children and grandchildren, household members do accept many of the new food choices grandparents introduce. Adult expectations of children's likes and dislikes, rather than the reality of what children will eat, often defines the child's diet. By educating caretakers' about their influence on their children's diet, and by teaching caretakers to prepare and present a wide variety of foods to children, nutritional status of children can be improved.

Participant observation and interviews also revealed older Puerto Ricans know of and can prepare a wider variety of mixed dishes than their children. This is particularly true for traditional Puerto Rican dishes. Older Puerto Ricans, particularly those who did not leave Puerto Rico until they were adults, introduce and continue the consumption of traditional dishes whose existence or recipe may otherwise have been lost or forgotten.

Participant observation also revealed that grandparents made less of a distinction between what foods were appropriate for children and for adults than the parents of children. Respondents reported their parents positively influenced their child's diet by introducing foods the mother had assumed the child would not accept, or by introducing foods the mother of the child did not know of or did not know how to prepare. For example, while some mothers assumed their children would not want to eat certain traditional Puerto Rican dishes, fruits or vegetables, grandparents would offer these foods

and other foods to children as regular practice, and in turn, children accepted them without incident. These had the effect of increasing the variety of foods the household's children consumed, and often the new foods added were healthful choices, such as fresh fruits or vegetables, fish and seafood. Other foods introduced by grandparents were often homemade Puerto Rican or American mixed dishes aimed at feeding the entire household. These dietary changes had beneficial effects on the nutrition of household members. One single mother reported since she and her son moved into her parents' household, her son had gained over ten pounds and he had added new healthful food choices to his diet.

In contrast to the positive influence grandparents can have on children's diet, assumptions the parental generations have about appropriate foods for children often negatively impact nutritional status. Some parents purchased and prepared foods specifically for the children in the household that were not consumed by any adult household members. Unfortunately, most of these foods were unhealthy choices such as candy, salty snacks, fried foods, and processed foods, e.g., hot dogs, potato chips, processed American cheese, frozen TV dinners or boxed macaroni and cheese. Foods intended for children also included high sugar beverages and cereals, sweets and desserts.

As discussed earlier, household extension adds assistance with the domestic sphere, allowing household members more freedom to participate in wage labor. Female labor force participation for women in extended households affects dietary patterns. While traditional gender roles have meant that women were in charge of the domestic sphere and household duties, new roles for women as formal sector workers have taken them into the public sphere. The "double day" of paid employment and domestic duties

means women have less time, and motivation, for domestic chores. Working women in Hartford are no longer cooking large meals everyday for their families, perhaps as their mothers or grandmothers did. Meals have become smaller and less elaborate, and take-out and restaurant food provides a fast, easy way to feed the family after women have worked a full day outside of the home.

One family in this study illustrated the changes in dietary habits associated with paid employment for women. Luz lives in an extended household with her parents and her young son. Her mother and father both work full time, while she stays home to take care of her child. Her mother was once the primary cook for the family, but her mother no longer cooks dinner for the family everyday or in the fashion she used to. Her mother will cook dinner at home Monday through Thursday only, and on Fridays the family eats out in a restaurant, usually joined other family members. While Luz's mother once spent weekends that were once devoted to cooking meals for the entire family, now "maybe she'll cook, maybe not." Luz contrasted her mother's present style of domesticity with her past patterns:

*My family in Puerto Rico, when they cook, they cook the whole thing, you know, they make a big dinner. And we just cook simple. Actually, my mother works. When she comes home, she comes around six or seven, and she is tired. She is not interested in the food. She just takes whatever. So, you know, we don't hardly cook the Puerto Rico way. Before she used to go all out cooking, but now, she just cooks simple. One, two, three, she out of there. She used to cook every weekend, and cook them big meals. A lot of family would come and we all would eat. But now, she's like lazy (laughs). It's a big difference.*

#### Extended family with nuclear family core

Some extended households were comprised of nuclear families, i.e., the study child and his or her parents, sharing living quarters with the grandparental generation. In

these households, the parental generations were the household heads. Some households included one set of grandparents, i.e., either both the mother's parents or both the father's parents, while others had only one grandparent representing their generation. In all these latter cases, the grandparent was the maternal grandmother. No households included grandparents from both sides of the family.

Other three-generation households with a nuclear family core were larger, and included more family members, such as the child's aunt(s) or uncle(s). Spouses or partners of the child's aunts and uncles may also be household members. For example, Vilmarie, her children's father and her children shared their home with both of Vilmarie's parents and two of her brothers. Awilda's three-generation household was more complex, and differed from other households in this category because she and her husband as grandparents were the household heads. In the other three-generation households studied, the parental, not the grandparental, generation headed the household. Awilda and her husband were the primary supporters of the household and were raising three children of their own, aged nine, eleven and fifteen, and were also raising four of their grandchildren, aged five, six, seven and eight. One of Awilda's adult sons and his wife also resided in the household.

Awilda's household was the largest household studied. Awilda had assumed the role of caretaker of her grandchildren when her daughter was incarcerated. She had been arrested over a year earlier for selling crack cocaine. Awilda shook her head as she explained her daughter was not a user, but saw selling drugs as a way to support herself and her children. Her daughter has been living alone with her children when she was arrested, so her incarceration meant her children would be placed under foster care if

family members could not assume the responsibility of their care. Awilda and her husband took her grandchildren into their household.

### Acculturation and Diet

The second objective of this research was to investigate the relationship between dietary characteristics and acculturation levels. How does migration and residence on the mainland affect the diet of incoming Puerto Rican immigrants? What facets of ethnic diet are lost or maintained, and what new foods and consumption patterns do immigrants adopt? How has diet changed through successive generations?

Ethnographic research in Hartford revealed that migration from Puerto Rico and residence in Hartford does affect and alter the diet and consumption patterns of Puerto Ricans. Despite the availability of traditional ingredients and foods for many Puerto Ricans in the U. S. including Hartford Puerto Ricans, migrating to the mainland also puts the newcomer in a new cultural milieu that includes new foods and eating patterns.

Puerto Ricans hold on to some aspects of their ethnic diet, while incorporating new dietary patterns and food choices. The results of these changes and blending should not be considered as clearly a benefit or a weakness to the nutritional status of Puerto Ricans, but rather they result in either improvements or detriments to nutritional status depending on the eating behavior considered.

The nature, degree and speed of dietary change vary between individuals and households because of mediating factors. These mediating factors include the level of interaction with individuals, groups or institutions outside the Puerto Rican community, migration patterns, settlement patterns, household composition, socioeconomic status, etc. Furthermore, dietary patterns are dynamic and ever changing because of variation in

these mediating factors. Household economic fluctuations, circular migration, changes in household composition, changes in employment status, life cycle changes and migration within the city or within the mainland United States all continue to alter food patterns over time.

The acculturation process does not only affect the incoming migrant. Rather, the cultural influences brought into a community by incoming immigrants alter and affect that community as well. Immigrants bring with them new social norms, ideologies, and bodies of knowledge. In Hartford, Puerto Rican and other Hispanic restaurants are frequented by the non-Latino community as well as the Latino. The influence of the Puerto Rican culture and the importance of their economic patronage in Hartford are evident in the Chinese restaurants that serve the Park Street neighborhood. Several Chinese restaurants serve plantains as a regular part of their menu. With the addition of this Puerto Rican staple, the Asian restaurants can cater to and attract the local Hispanic clientele to patronize their establishments.

Thus, incoming Puerto Rican immigrants are influenced by and influence the culture of Hartford. For Puerto Rican women born on the mainland, however, their confrontation with a new culture may result when they visit or move to Puerto Rico. The entire range of Puerto Rican foods is often unknown or unfamiliar for Puerto Ricans born on the mainland or for Puerto Rico-born women who left Puerto Rico when they were young. For these women, the re-introduction to Puerto Rican food occurs because of a visit or a move to the Island, or through the addition of a relative that brings their knowledge into the household.



One respondent, who was born and raised in Hartford, described her experiences the first time she visited relatives in Puerto Rico. She explained her family lived in a rural area of the Island and their homegrown produce (*viandas*) was the core of their daily diet. Although she knew of these foods, they had been mostly unfamiliar to her and had been consumed more by her parents. She explained:

*When I was in Puerto Rico, I would not eat because the food is different from over here, so, um, I would not eat. The only thing I would eat was just the rice. But, like vianda and all that, I would not eat it, and those soups...asopaos. I don't like them. They would try to teach me how to eat it, but I would not eat it. So when I came from Puerto Rico, I came skinny because I would not eat.*

Another respondent compared the experiences of incoming Puerto Rican confronting new eating patterns, with her experiences confronting dietary patterns in Puerto Rico.

*If a girl from Puerto Rico comes to Hartford, she wants to eat rice and beans all the time. But if I go to Puerto Rico, I want to eat like McDonald's, Wendy's, Subway, you know, I'll miss that. Because I'm used to it. I'm used to going out every weekend and eating outside. If I go to Puerto Rico, that's one thing I am going to miss.*

### Puerto Rican Food Consumption

Regardless of length of residence in the continental United States, Puerto Rican staples and traditional mixed dishes continued to play an important role in daily diet in all households studied. All women interviewed reported they cook Puerto Rican food in their homes, and 90% of women reported they cook traditional foods at least once a day. Traditional staples, such as rice and beans, continue to be an important part of the respondents daily food plan, and mixed dishes are prepared at home, eaten in restaurants,

or purchased prepared from local *bodegas* and markets. Traditional drinks such as *café con leche* and *malta* are consumed by both children and adults.

Respondents and their families consume rice and beans often, daily for many families, and even several times per day. White rice with beans, or yellow rice flavored with meat and vegetables was served for lunch and dinner, and is an inexpensive, convenient meal for feeding large families. Respondents reported they make many different dishes with rice by combining it with a variety of foods, including chicken, fish, bacon, Vienna sausages, hot dogs, corned beef, fish, shrimp, octopus, bacon, pigeon peas (*gandules*), beans, and corn. Rice is also used to make other mixed dishes, such as *asopao* (a thick rice soup made with chicken or seafood) and *arroz con pollo* (chicken with yellow rice). Rice also a can also be purchased in large quantities that can be stored for later use.

Beans also continue to be an important protein source for Hartford Puerto Ricans. Beans are prepared fresh from dry beans by some respondents, but most prepare canned beans that are flavored and cooked with tomato sauce, onions, green pepper, and *sofrito* (an herb mixture used for flavoring foods). Respondents consumed pink beans (*rositas*), white beans, and red kidney beans, but black beans, more indicative of Hispanic cuisines, have not entered the diets of Hartford Puerto Ricans. This may change because of the influence of Colombian and Mexican cuisine that includes black beans. Like rice, beans are prepared for lunch and/or dinner, and are served with rice, fried bread patties (*domplines*), or plantains (*tostones* or *maduros*).

Puerto Rican mixed dishes also continue to be an important part of the diet for both adults and children. While some mixed dishes consumed are prepared from fresh

ingredients at home, at other times caretakers purchase foods already prepared from local restaurants and markets.

Despite the fact that all women reported they prepare and consume Puerto Rican foods, even the least acculturated, Island-born women interviewed reported they consume less traditional Puerto Rican food now as compared to when they lived in Puerto Rico.

The reduction in the consumption of Puerto Rican food is manifested not only in a decrease in the amount of Puerto Rican food consumed, but also in the variety of Puerto Rican foods consumed. There were several reasons for the reduction in Puerto Rican food consumption. First, the addition of new foods encountered in Hartford increases the variety of foods consumed. While a traditional Puerto Rican diet consists more of staple foods, such as eggs, bread, rice, beans, *viandas*, plantains, fish, seafood, chicken or pork, eaten daily with little variation, the diet of Puerto Rican immigrants expands as new foods are encountered, tried, and incorporated into one's diet. A simple breakfast of *café con leche*, bread and butter or cheese was common on the Island, and was described as "what my grandmother always ate" by a woman born and raised in the continental U.S. Traditional, homemade lunches and dinners consisted of rice or *viandas*, fish or meat, perhaps served with bread or salad.

In contrast, respondents reported that U.S. consumption patterns involve a wider variety of foods from day to day and from meal to meal. This characteristic is illustrated in the assumed undesirability in the United States of having to eat left-overs, where the same food is eaten is for consecutive days or consecutive meals. The relatively common practice of planning meals to avoid having the same thing for lunch and dinner also reveals the pattern of desiring a wide variety of food choices.

Changes in diet and consumption patterns can also stem from the loss of traditional dietary patterns that cannot be transferred to the new environment. The unavailability of traditional ethnic foods in the immigrant's new home, or an inability to recreate a traditional cooking method, will force the immigrant to abandon some foods or traditional dishes. In Hartford, informants reported that although many Puerto Rican foods are available in local stores and restaurants, there are still the "little special things", such as traditional herbs, that can be cannot be found in Hartford. Traditional roast pork, cooked outdoors over a roasting pit, is an important food for celebrations in Puerto Rico that obviously cannot be transferred to the urban environment of Hartford.

Although all women reported the continued consumption of Puerto Rican foods, changes have occurred in the patterns their consumption. Some women reported dietary changes associated with migration and family separation. For example, several women reported they desire foods they consumed when they were children, but they did not learn how to prepare them before leaving the Island or moving away from family members. One woman now only prepares canned beans because she does not know how to prepare them from scratch with dry beans, while another has abandoned eating beans with cornmeal (*funche*) or beans with dumplings (*domplines*) because she does not know how to make them. Others have abandoned home preparation of some Puerto Rican foods for the ease and convenience of purchasing them already cooked from neighborhood restaurants and markets, or from women in the neighborhood who vendor foods from their homes.

Initial ethnographic interviews showed there might be a shift to an even greater reliance of rice as a major staple on the mainland. While rice has always been an

extremely important staple in Puerto Rican cuisine, respondents reported that cornmeal dishes (such as *sorrullitos* or *funche*) often served with chicken or codfish stew, and *viandas* (a mixture of boiled starchy vegetables) were also important staples in their daily diets. The increased costs of *viandas* in Hartford, the inferiority of the produce available, and the need for the produce to be fresh, when compared to the low cost, availability, and preservative qualities of rice, could explain why an even greater reliance on rice may be occurring. Another possibility is regional differences in consumption patterns in different part of Puerto Rico, with some relying more on *viandas* and cornmeal based dishes, while other consume greater varieties of rice. These regional differences may be diminishing as Puerto Ricans in Hartford become more dependent on rice as the major household staple.

#### American Food Consumption

Along with the consumption of Puerto Rican foods, all households also consumed at least some kinds of American foods and mixed dishes, such as spaghetti and meatballs, lasagna, tacos, mashed potatoes, beef stew, peanut butter and jelly or tuna fish sandwiches, and macaroni and cheese. While women were introduced to some of these foods after moving to Hartford, others seem to be the result of preacculturative effects. Respondents who were recent arrivals to Hartford reported the consumption of some of these foods, suggesting the cultural influence of the United States in Puerto Rico has made Puerto Ricans familiar with American-style foods even before moving to the continental United States. Furthermore, return migration to the Island means Puerto Ricans bring new dietary patterns acquired on the mainland back to Puerto Rico, influencing even those who have not left the Island. Participation in food assistance programs such as WIC brings new foods into the diets of low-income Puerto Rican

families in Hartford because the program provides specific foods to recipients, some of which may not have been a part of previous dietary patterns.

### Increased Use of Processed Foods

Women reported increased residence in Hartford was accompanied with an increase in the use of processed foods. One respondent compared her diet as a child in Puerto Rico to her children's diet:

*It's that life before is so different than now, because before they would give us foods made in the house, healthy foods - not frozen foods like now. They made us hot foods on the stove and it was served as soon as it was made. You know, it is different than now.*

One woman compared her food buying habits to her mother's usual purchasing behavior. While she relies more heavily on what she called "easy food", she reported her mother buys fresh staple foods to create made from scratch meals.

*When I go shopping...if I go shopping, I would not bring the stuff that my mother brings. I would bring like, junk food. More junk food than actual food. But my mother doesn't. My mother brings food to cook, less junk food.*

Processed foods consumed included canned soups, meats, fruits, vegetables and pasta, dry soup mixes, and boxed macaroni and cheese mix, frozen juice, t. v. dinners and frozen vegetables, pre-packaged foods such as pudding and gelatin snack cups, and granola bars. Some caretakers added fresh ingredients to processed foods to make them more flavorful, such as adding tomatoes and spices to canned beans, or more filling, such as adding potatoes and peas to a dry soup mix. Also observed was the use of convenience ethnic foods, such as canned beans and prepared *sofrito*.

Women incorporate processed foods because they are easy and fast to prepare for a quick, simple meal. In addition, children readily accept foods such as macaroni and

cheese and canned pasta with no hesitation. For some, a lack of cooking knowledge encourages the use of processed and convenience foods, while others purchase them because of their long shelf life, an important consideration for women with transportation barriers. Still others simply do not enjoy cooking, and do not feel the same level of domestic commitment as previous generations of Puerto Rican women. These women prepare foods that are easy and fast, and that their children will accept. Unfortunately, these women are feeding themselves and their children with little worry about the nutritional adequacy of their diets.

### Food Group Consumption

Table 4-10 shows correlations of the ethnicity/acculturation measures and daily food groups consumption, i.e., mean number of times consumed per day.

Table 4-10 Correlations of Mean Daily Food Group Consumption and the Ethnicity Acculturation Measure

	Ethnicity/ Acculturation Measure
Total Meat per Day	.677**
Total Vegetable per Day	.341
Total Fruit per Day	-.148
Total Carbohydrates per Day	-.020
Total Milk per Day	-.042
Total Puerto Rican Food per Day	.049

\*\* significant at the .01 level

First, we see there is a significant positive relationship between the EAM and meat/protein consumption ( $r = .677, p < .01$ ), i.e., meat consumption increases as the EAM increases toward the high ethnicity/low acculturation end of the scale. This correlation was significant even when traditional Puerto Rican legumes (beans and *gandules*) were excluded in the analysis ( $r = .600, p < .01$ ). Vegetable consumption was

also positively, but not significantly, correlated with the EAM, i.e., vegetable consumption increases as EAM increases towards the high ethnicity/low acculturation end of the scale.

Fruit consumption was found to be negatively correlated with the EAM, i.e., daily fruit consumption decreases as the EAM increases towards the high ethnicity/low acculturation end of the scale.

The association between low acculturation and increased meat consumption can prove detrimental in terms of fat and cholesterol intake. Less acculturated women reported the use of high fat, processed meats such as cold cuts, sausages, hot dogs, bacon and Vienna sausages, as well as chicken with the skin left on. Hot dogs in particular were a very common food consumed by children in this project, with some children observed eating hot dogs several times per day. Hot dogs are offered often because children readily accept them, and caretakers can use them both for meals and for snacks. For example, children consumed hot dogs with eggs at breakfast, plain with ketchup as a snack, boiled on white bread for lunch, sliced up and fried as a snack between meals.

Caretakers also purchase processed meats because they are relatively inexpensive, and canned meats such as corned beef and Vienna sausages can keep for extended periods. These meats are also used because they can be the basis of larger meals that feed the entire household. Vienna sausages are used to flavor large amounts of yellow rice with vegetables, while corned beef is mixed with potatoes and peas and served over white rice. Using inexpensive foods as the basis for large mixed dishes is another money-saving strategy vital in households where funds are extremely limited.



Although neither was significant, fruits and vegetables had opposite relationships with the EAM. Lower levels of fruit consumption were correlated with women on the high ethnicity/low acculturation end of the scale, while vegetable consumption was positively correlated with EAMs on the high ethnicity/low acculturation side of the scale. Ethnographic interviews revealed lower levels of fruit consumption for less acculturated women may be the result of the differences between food available in Hartford and food they are accustomed to in Puerto Rico. Several respondents referred to the superiority and freshness of foods available to them from local farms, family-owned farms or home gardens in Puerto Rico. These differences are especially noticeable for new arrivals and those from rural areas. Several respondents saw this difference not only in the superior taste of fresh foods in Puerto Rico, but also viewed foods on the Island as more healthful and nutritious. Irma (EAM = .50) reported:

*There (in Puerto Rico), it is different because you get food in the farm and here you buy it frozen or whatever. There you buy fresh meat and the vegetables and fruits you pull from the tree - the whole arm of bananas. Here, you have to go and buy them. There, it is fresher. Like for example the fruits, you pick them from the branches and you eat them. Milk that was just taken from the cow. There, the foods are fresher and healthier. Before I ate the things that were good for me and almost never got an upset stomach. Everything was nutritious. Now they eat frozen food and all that can give you a pain in the stomach, make you sick. Before everything was very nutritious, healthy. Now everybody in the world is sick from the food that they are eating.*

Awilda (EAM = .77) also compared the freshness and nutritional level of foods available in Hartford to her past experiences in Puerto Rico.

*The seafood in Puerto Rico is much fresher than seafood from here. Very, very different... Over there it s more nutritious, fresher, with a certain taste almost equal to meat.*

When asked to compare foods in the U.S. to those in Puerto Rico, Vivian (EAM = .50) said:

*The taste is not the same. I think it is the ingredients, because there everything is natural. Here it is less fresh. There, everything is from the farms.*

The data showed a positive correlation between the EAM and vegetable consumption. One reason could be the continued consumption of traditional vegetables such as plantains, *yautia*, *batata*, *malanga* and *ñame* that are eaten in larger quantities and more often than other kinds of vegetables. While vegetable such as string beans or corn may be eaten as a side dish or a topping for a small salad, traditional starchy vegetables (*viandas*) are consumed as the main or sole component of a meal. Although more acculturated women may be consuming a wider variety of vegetables they have become familiar with on the mainland, such as cauliflower, broccoli, beets and spinach, these vegetables are not consumed in the quantities or as often as other, more traditional vegetables.

#### Comparing Puerto Rican and U.S. Meal Patterns

##### Breakfast

Ethnographic interviews concerning differences in dietary patterns pre and post-migration were conducted.

Table 4-11 reveals the comparison of breakfast foods in Puerto Rico with typical breakfast foods in the continental United States. The first thing one may observe is the much larger number and greater variety of breakfast foods that are found in American-style breakfasts. Puerto Rican breakfasts are simpler and smaller, consisting of eggs and bread, or bread and cheese, with *café con leche*.

Table 4-11 Comparison of Breakfast in Puerto Rico and the Mainland United States

	Breakfast in Puerto Rico	Breakfast in the United States
Protein	Eggs	Eggs Peanut butter Ham Bacon Hot dogs Sausage Sardines
Carbohydrates	Bread Pancakes	Bread Pancakes Waffles French toast
Dairy	Cereal (hot and cold) <i>Café con leche</i> Cheese, white	Cereal (hot and cold) <i>Café con leche</i> Cheese, American Milk Milkshakes ( <i>batidas</i> )
Fats		Butter
Beverages		Coffee Fruit juice

In comparison, breakfast in the United States involves more kinds of foods, often served in greater quantities. A large breakfast that includes eggs, meat, bread, juice and waffles is common for individuals of all ages. Table 4-11 also reveals the large role meat plays in the U. S. breakfast, whereas meat was never mentioned as a common breakfast food in Puerto Rico. The respondents reported consumption of ham, bacon, sausage and hot dogs as accompaniments for eggs for breakfast.

A U. S.-style breakfast has also seen the addition of waffles and French toast. Waffles consumed are mostly purchased, frozen waffles that are simply heated in the toaster. Although both hot and cold cereal was reported as common breakfast foods in both Puerto Rico and the US, anecdotal evidence suggests that there are differences in the quantity of consumption of hot and cold cereals. In Puerto Rico, hot cereals prepared

from scratch, not instant, were more common than packaged, cold cereals. In contrast, in the United States, cold cereal is becoming more common because of convenience and children's genuine desire for the many cereals they see marketed on television.

Unfortunately, much of the cereal consumed included those high in sugar, and served with whole milk in all but one household.

The data also showed that women have changed from the consumption of traditional kinds of cheese has been replaced with the consumption of American cheese. This change may be due to the influence of foods supplied by food programs such as WIC.

Observation revealed that parents are more likely to make large, American-style breakfasts for their children, but eat lighter breakfasts themselves. Caretakers may prepare eggs, sausage, waffles and juice for the children in the household, while they eat bread and butter with *café con leche*, fruit or cereal.

Several informants discussed differences in breakfast patterns. Madeline, who was born and raised on the mainland, said she was exposed to a more traditional breakfast eating patterns after visiting her grandparents in Puerto Rico. She said:

*Something that I used to like when I was younger was pan con cafe con leche (bread with coffee with milk). I got in the habit of seeing my grandparents eat that early in the morning, con queso de bola (with ball cheese). That used to be something common.*

Madeline continued this breakfast eating pattern for a while in the US, but over time this pattern faded as she prepared foods her husband and children desired. The addition of restaurant food for breakfast was also reported by informants.

## Lunch

Table 4-12 shows the reported comparison of foods typical in Puerto Rican and U. S. lunches.

Table 4-12 Comparison of Lunch in Puerto Rico and in the Mainland United States

	Lunch in Puerto Rico	Lunch in United States
Meat and other Protein	Fish Chicken, fried Beans Pork chops	Fish Chicken, fried Beans  Steak Ground beef (hamburgers) Hot dogs Ham
Carbohydrates	Pasta Rice Potatoes, fried <i>Víandas</i> Dumplings ( <i>domplines</i> ) <i>Guanimes</i> <i>Funche</i>	Pasta Rice Potatoes (fried, mashed, baked)
Fruit	Bananas	
Vegetables	White sweet potatoes ( <i>batatas</i> ) Pigeon peas ( <i>gandules</i> ) Plantains	
Combination Dishes		Plantains Macaroni and cheese Lasagna Soups (canned, dry mixes and home made) Sandwiches Pizza Butter
Fats		

Looking at protein consumption, we see more kinds of meats represented in U.S. eating patterns. Processed, high fat meats, such as hot dogs and ham, have been added, and beef, not at all represented in the Puerto Rican case, is represented in several forms in

the typical U.S. lunch. Hamburgers and cheeseburgers from fast food restaurants was a desired food for the study children.

Looking at carbohydrate intake for lunch (able 4- 18) reveals that a larger variety of carbohydrates was reported common for lunch in Puerto Rico, and traditional foods such as *viandas* and *domplines* are not mentioned as foods commonly eaten for lunch in the U.S. Rice continues to be an important part of the diet, as does pasta and potatoes. However, respondents reported only fried potatoes, i.e., French fries, as a common lunch food on the Island, whereas in the U.S. more Euro-American ways of eating potatoes, mashed and baked, have been added to the menu. The only fruit mentioned, bananas, was reported as part of an Island diet. Vegetables in the Puerto Rican lunch included pigeon peas, *viandas*, sweet potatoes and plantains, but only plantains were reported as eaten for lunch in the U.S. Furthermore, plantains served as *tostones* are high in fat.

Table 4-12 also shows the addition of Euro-American style combination dishes, such as macaroni and cheese and pizza, to the diet of Puerto Ricans in Hartford. This list of foods and dishes eaten in the United States also reveals an increase in the consumption of processed, prepackaged foods, such as macaroni and cheese and dry soup mixes. Interviews also revealed a shift toward restaurant or take-out food, such as pizza and hamburgers, for lunch. Interestingly, take out foods were not mentioned as common foods for dinner (Table 4-13), suggesting dinner is seen as a more home-based, home-prepared meal for these families.

### Dinner

Table 4- 13 illustrates respondents' comparisons of typical dinners in Puerto Rico compared to their present diet in United States.

The meat category in Table 4-13 shows that the comparison of dinner in Puerto Rico and dinner in the United States is quite similar, having an almost equal number of foods represented, as well as having most foods represented in both U. S. and Puerto Rican dietary behavior. Two differences can be observed. First is the elimination of eggs as a food consumed for dinner. The second, similar to what was found in the data for lunch, is the addition of processed meats to protein sources consumed.

Table 4-13 Comparison of Dinner in Puerto Rico and in the Mainland United States

	Dinner in Puerto Rico	Dinner in the United States
Meat and Other Protein	Eggs Chicken Beans Pork, chops and roast Beef, steak Fish and seafood	Chicken Beans Pork, chops and roast Beef, steak and stew Fish and seafood Vienna sausages Corned beef, canned
Carbohydrates	Bread Rice, white and yellow Potatoes, fried <i>Sorrullitos</i>	Rice, white and yellow Potatoes, mashed
Vegetables	Plantains Corn Pigeon peas ( <i>gandules</i> )	Pasta, spaghetti, lasagna Plantains Corn Pigeon peas ( <i>gandules</i> ) Lettuce Green beans Carrots Beets
Combination Dishes	Soups Yellow rice with meat and vegetables <i>Alcapurrias</i> <i>Pasteles</i> <i>Papas rellenas</i> (stuffed potatoes) Dumplings with beans Rice and beans	Soups Yellow rice with meat and vegetables     Rice and beans Lasagna Beef stew

The carbohydrate group in Table 4-13 also reveals patterns similar to those found in the lunch data. Rice, both white and yellow, continues to be important components of dinner in these households. Potatoes also are represented in both the U.S. and Puerto Rico categories, but once again, fried potatoes have been joined by mashed potatoes, suggesting the addition of more Euro-American food choices.

The vegetable category reveals some meaningful patterns. Respondents reported the continued consumption of plantains, corn and *gandules*, but the list of vegetables commonly consumed in the U. S. has grown. The data reveal the addition of green vegetables, e.g., green beans and lettuce, and vegetables high in beta-carotene, e.g., carrots.

The list of combination foods implies that traditional Puerto Rican dishes have become less common, and American food choices, such as beef stew, have been added.

#### Meal planning and scheduling

When contrasting consumption patterns in Hartford with those on the mainland, women reported in Puerto Rico it is customary to follow a scheduled, somewhat inflexible patterns of eating that varies little from day to day.

*In Puerto Rico, my grandmother always had a schedule of cooking. At 5:30 in the morning, she was already eating her café con leche, cheese and bread, and that was her breakfast. She ate that always, always, everyday, at that same time.*

In contrast, U.S. residents may consume more or fewer meals, and eating schedules vary according to daily schedules, personal desires, and other factors. Women may skip breakfast and or lunch, or eat only a mid-morning meal. A busy family schedule may mean restaurant visits to save time. Statements from several women



illustrate this point.

*Sometimes, I make lunch and sometimes no. There in Puerto Rico, they make three meals, but here it's a custom to not make lunch, and only eat in the morning and in the evening... There one eats three times a day or more. Here, sometimes one eats two times.*

\*\*\*

*Sometimes I don't eat lunch. Like if it is the weekends, I'll be busy, and we are going out and stuff. Or, sometimes in the weekend, I just eat out. I eat McDonald's, or Burger King, or something. It depends what we are doing, where we are going.*

### Consumption of High Sugar Drinks

Children were observed consuming large amounts of high sugar soft drinks and sodas. Participant observation revealed for some caretakers, language barriers might result in confusion concerning the content of soft drinks versus real fruit juice. Some women seemed to interpret any label that declared “orange” or “grape” meant the enclosed beverage contained real fruit juice of that flavor. Some caretakers would refer to any fruit-flavored beverage as *jugo*, the Spanish word for juice, and would encourage children to finish their “juice” before they were allowed other treats, implying these women believed these drinks contained the same nutritional benefits for their children as 100% fruit juice. Educational campaigns that teach caretakers how to use food labels to distinguish the contents of drinks they purchase for their children can have a positive impact on nutritional status. Alterations in the design of food labels to make them clearer and easier to understand for non-English speakers and those with low literacy skills also will assist consumers in making healthy food purchases (Haldeman et al. 2000).

## CHAPTER 5: DISCUSSION AND CONCLUSIONS

### Summary

This research project used ethnographic methods, including in-depth interviews and extended participant observation, to investigate the relationships between household composition, acculturation and diet among low-income Puerto Rican households in Hartford, Connecticut.

### Subjects

#### Adults

All respondents were the primary caretakers of a preschool male or female child who was between three and five years old. Most were the mother of the study child, but other female relatives, including one grandmother and one aunt were also included in the sample. Female caretakers were between the ages of nineteen and forty seven years old, with the majority in their twenties. Women's educational levels varied. While almost one third of women had less than an eighth grade education, one third had graduated high school. Less than ten percent had attended college, and no respondent had a college degree. Most women were single, 55%, or in consensual unions, 23%. Fourteen percent were legally married. All but two respondents were born in Puerto Rico; both of these mainland-born respondents were born in Hartford.

All adult caretakers responded to an ethnicity/accluturation instrument that was created by the principal investigator. The range of possible scores on the acculturation measure ranged from -1, representing the most acculturated, to +1, representing the least acculturated. Women in this sample scored only on the positive side of the scale, with a range from .09, representing the most acculturated in the sample, to .77, representing the least acculturated in the sample. All but two women identified themselves as Puerto Rican; two women identified themselves as Hispanic. Sixty percent of caretakers reported Spanish was the primary language spoken in their homes.

### Children

All study children were between three and five years old. Unlike their adult caretakers, the majority of study children were born on the mainland, in Connecticut, New York and Pennsylvania.

### Household Size and Composition

Household size ranged from three to eleven members. Almost one third of households studied were nuclear family households, while half of the households were female-headed households. Almost one-quarter of households were extended, and included several generations and non-nuclear family members.

### Household Composition and Diet

#### Meal and snack consumption

Children in all the household types studied consumed a similar number of meals, but snack consumption was higher among extended households, i.e., almost twice that of female-headed households for one day of observation. The increased number of snacks is the result of foods offered by larger numbers of household members. However, rather

than contribute beneficially to the diet of the household's children, often these snacks are unhealthy foods, bought as treats for the household's children.

### Food group consumption

Children in female-headed households consumed fruit less than half as many times a day as children in nuclear or female-headed households. Vegetable and meat consumption was highest among children in nuclear family households, while dairy consumption was highest for children within female-headed families.

### Nuclear family households

Nuclear families are vulnerable because the entire household's economic stability rests primarily with the male wage earner. While all women in this study were receiving transfer payments and food assistance, legally married women received only limited funds, making income earned from wage labor the main source of income for the family. The reliance on these wages as the primary means of support for the household means any change in the economic contributions of the primary wage earner, because of illness, injury, job loss, legal problems, family problems or marital dissolution, have sudden and devastating impacts on the entire household.

### Female-headed households

Female household heads carry the entire burden of domestic and childcare responsibilities for the households and children, as well as being the sole economic provider. Female-headed households are often the poorest because of the absence of a male wage earner, reduced job opportunities and inequitable wages for women. Although informal sector activities can be reconciled with domestic and childcare duties, they

provide only inconsistent and lower wages than formal sector employment, and do not offer any benefits.

Female household heads used household survival strategies to combat the impact of poverty and food insecurity on their children. These strategies included careful meal planning and food rationing, skipping meals and selective purchasing. Despite these strategies, transfer payments and food stamps are seldom sufficient to last for their intended period.

Food insecurity has both physical and psychological impacts. Nutritional deficiencies affect the physical health of adults and the growth and development of children, but constant worry and parental guilt take an emotional and psychological toll as well.

#### Extended family households

The dietary patterns of older members in extended family households influenced the diets of all household members, and could be a benefit to the household's diet. The diets of older members relied more heavily on staple foods, and often a wider variety of staple foods, than their children's diet. The diets of younger generations also included more processed and convenience foods, and increased restaurant use. Older family members offered a wider variety of foods to the children in the household, with less preconceived ideas about what children would accept or reject. Thus, older family members could positively influence the diet of other household members, especially children, by introducing fresh and healthful foods, such as fruit, vegetables and fish, into the household's eating patterns. Single mothers who were living with their parents reported improvement in their child's diet because of increased household funds, the older

generation's positive input into dietary practices, and a more stable living environment for themselves and their children.

### Acculturation and Diet

Ethnographic research in Hartford showed the relationship between diet and acculturation is not a one-way, simplistic change from the consumption of traditional, ethnic foods to the total adoption of a new dietary pattern. The nature, degree and speed of dietary change varies between individuals and households because of mediating factors, such as social interaction outside the Puerto Rican community, migration patterns, settlement patterns, household composition and socioeconomic status. The interrelationships of diet with the larger social and cultural world of the individual means dietary patterns are dynamic and ever changing because of variation in these mediating factors. Household economic fluctuations, increased length of residence on the mainland, return migration to Puerto Rico, changes in household composition, changes in employment status, life cycle changes and migration within the city or within the mainland United States all continue to alter food patterns over time. Furthermore, the effects of migration and acculturation are reciprocal, i.e., incoming immigrants are affected by their new cultural, but the presence of the immigrant culture affects their new environment as well.

### Puerto Rican and American food consumption

Women at all acculturation levels reported the continued consumption of Puerto Rican foods, with 90% of women reporting they cook some kind of Puerto Rican food in their homes everyday. Despite the continued importance of traditional foods, Puerto Rico-born women reported their consumption of Puerto Rican foods has decreased since

migrating to Hartford, due to the addition of new foods and the reduction or abandonment of traditional ethnic foods. Traditional food choices and dietary patterns were abandoned by choice, such as reducing intake of high fat fried food choices, or of necessity, such as abandoning foods that are too expensive, inferior, or unavailable in Hartford. Preparation of traditional foods has changed to include processed ingredients, and some foods that were once prepared from scratch at home are now purchased already prepared from local restaurants and market.

All households consumed Euro-American foods as well. For Puerto Ricans born on the Island, preacculturation to foods and dietary patterns common on the mainland are inevitable because of the strong cultural and economic presence of the United States in Puerto Rico. Return migration to the Island also transplants new dietary behaviors acquired while living on the mainland back to Puerto Rico. Therefore, Puerto Ricans become accustomed to American foods and dietary patterns even before migrating to the mainland. Food institutions in Hartford, food assistance programs, interaction outside the Puerto Rican community, the media, children's preferences and other factors also bring new food choices into the diets of Puerto Ricans in Hartford.

#### Food group consumption

Meat consumption was found to be correlated with the ethnicity/acculturation measure, while vegetable consumption was also positively, but not significantly, correlated with the EAM. High levels of meat consumption can be detrimental to children's diet because of the high intake of processed, high fat meats. Higher levels of vegetable consumption may be the result of large serving sizes of traditional vegetables compared to

other vegetables, as more acculturated caretakers had added new vegetable choices to their children's diets, including cruciferous vegetables and those high in beta-carotene.

#### Acculturation and meal composition

Ethnographic interviews concerning changes in diet after migration revealed several changes in meal composition. Breakfast has become a larger meal that includes more kinds of food, with a greater focus on protein sources, such as eggs and breakfast meats. New food choices such as waffles and French toast have been added, while cold breakfast cereals have become more common than hot, made from scratch cereals. Some traditional foods, such as white cheese (*queso blanco*) have been replaced with the American cheese supplied by food assistance programs such as WIC.

Reported changes in lunch patterns included a larger number of meats including high fat, processed meats. Restaurant food, specifically fast-food hamburgers, had become a typical lunch food for children on the mainland. Traditional carbohydrate foods, such as *viandas*, were no longer a common lunch food, while other types of carbohydrates, such as baked and mashed potatoes, had been added. American food choices, such as macaroni and cheese and pizza, had become typical lunch foods for children on the mainland.

Dinner patterns had changed the least, with meat, seafood, rice and some traditional vegetables continuing to play a part in dinner patterns on the mainland. However, some changes had occurred, including the addition of canned meats, as well as the addition of green and orange vegetables. Puerto Rican mixed dish consumption had been reduced, while the consumption of more American food choices, had been added.



### Discussion

Past literature on Puerto Rican identity has shown Puerto Ricans living on the mainland continue to maintain social, cultural, familial, economic, psychological and political ties to Puerto Rico and continue to maintain a Puerto Rican identity (Falcon 1993; Padilla 1997; Safa 1988; Duany 2000). Many Caribbean migrants in the U.S. are maintaining their ethnic identity instead of assimilating and becoming "Americanized", maintaining ethnic markers such as the Spanish language, music, dance, and food (Safa 1988). Indeed, even second or third generation Puerto Ricans continue to display strong ethnic identity and pride in their "Puerto Rican-ness" (Padilla 1987; Rogler and Santana-Cooney 1984).

Consistent with other literature, the data in this project show Hartford Puerto Ricans still maintain a Puerto Rican identity. This is illustrated in the continued use of Spanish into second and subsequent generations. Studies have shown very high percentages of Latinos in the U.S. speak Spanish in their homes. Puerto Ricans in New York City had the highest percentage of individuals speaking Spanish at home among Hispanics: 91% of Puerto Ricans, 90% of Cubans and 64% of Mexicans (Rodriguez 1991). Like past research, this project found the continued use of Spanish is the norm for the majority of women interviewed. Almost 60% of women reported Spanish was the primary language spoken in their households. All respondents spoke at least some Spanish, and no one reported they were monolingual English speakers, regardless of their place of birth.

Social and personal relationships among respondents also illustrate ethnic cohesion among Puerto Ricans in Hartford. Only one woman was in a relationship with a non-

Hispanic partner, and all but two respondents resided in the primarily Hispanic Park Street neighborhood.

Ethnic identity among Puerto Ricans in Hartford is also manifested in the maintenance of the Puerto Rican culture in dietary patterns, popular culture, holidays, family patterns and customs. New forms of identity expression that link Puerto Rican with Hartford's larger society, such as the Puerto Rican Day parade and celebration held every summer, serve to celebrate and share Puerto Rican culture with immigrant generations born on the mainland, as well as individuals outside the Puerto Rican community.

Dietary patterns also illustrate continued ethnicity among Puerto Ricans in Hartford. All respondents cook Puerto Rican food in their homes, and 91% reported they cook Puerto Rican food at least once a day.

#### Social and Cultural Influences on Dietary Patterns

Despite any preacculturative effects, fieldwork in Hartford revealed that dietary patterns do change after migration, due to the loss or decline in the consumption of ethnic foods, and the addition of new food choices and dietary patterns.

#### Social and cultural influences

After migration, new foods are introduced through contact with other cultures in Hartford, through the media, and by foods supplied by food assistance programs. The culturally diverse environment of Hartford exposes Puerto Ricans to Asian, Afro-Caribbean, and Mediterranean cuisine, as well as foods from other areas of Latin America. Children's exposure to American foods at school, such as mashed potatoes or tuna salad sandwiches, and through the media, also exposes the entire household to new foods as caretakers buy and prepare foods that are requested by their children. Women also try

new foods and make changes in dietary patterns because of health concerns for themselves and their families, such as decreasing salt intake, incorporating new fruits and vegetables into the household's diet, or reducing their intake of sweets. Foods provided by nutrition programs like WIC, such as American cheese and white bread, also influence dietary patterns by providing specific foods that may not otherwise have been foods part of the families' diet.

For Puerto Ricans born or raised on the mainland, confrontation with new cultural dietary norms means a reintroduction to traditional Puerto Rican foods. This occurs when they visit Puerto Rico, or when relatives from the Puerto Rico bring their dietary patterns into the household.

Mass media is a source of influence on incoming immigrants. Print media, radio and television bring hundreds of messages about food and diet into the homes and minds of adults and children. The prevalence of television ownership even within these low-income households points to its use as an effective means to direct nutritional campaigns to low-income families. Public service announcements, news stories or educational programs concerning beneficial dietary habits and healthful food choices may aid in expanding knowledge and improving diet. Targeting the bilingual Puerto Rican population of Hartford would best be accomplished with messages presented in both English and Spanish.

The media can have negative influences on diet as well. Advertising aimed at children, although strictly regulated, can instill desires for foods that are often unhealthful and expensive. Because of the limited financial resources of the families in this study,

fulfilling their children's desires can be financially burdensome, and a source of guilt for the parents when they cannot provide what their children want.

Previous research has shown nutrition education programs can be effective in changing dietary patterns among Hispanics (Wechsler et al. 1998). In this project, women reported knowledge gained through nutrition education campaigns influenced them to make positive dietary changes. For example, respondents reported learning about the links between diet and diseases such as heart disease and cancer, as well as the importance of adequate fruit and vegetable intake.

The primary means by which women received information was through health care institutions, food programs such as WIC, and through community organizations such as the Hispanic Health Council. As stated earlier, the unanimous presence of televisions in the homes of respondents can make televised public service announcements a viable avenue of information. Other research in Hartford found the most important channels of nutrition information were family and friends, doctor's offices, WIC program, television and magazines (Perez-Escamilla et al. 2000).

Food programs, such as food stamps and the WIC Program, provide much needed assistance in the acquisition of healthy foods for women and their children. Women voiced the importance of this program in extending their food budget. However, this and other research has shown that for many households, food stamp allotments and WIC benefits are not sufficient to provide the food they need for the entire month. Ethnographic research showed larger nuclear families, those without the added income of a parent or partner, and single headed households are at particular risk because of limited economic or social resources to call upon in times of need. These deficiencies can

negatively impact nutritional status. Recent research on Puerto Ricans in Hartford found the likelihood of being classified as food insecure was four times higher among households where food stamps did not last the entire month. (Himmelgreen et al. 2000).

Foods provided by the WIC Program contribute to dietary changes that occur after migrating to Hartford. Women reported some foods provided by WIC, such as tuna fish and peanut butter, were new foods added to their families' diets, while others have replaced varieties consumed in Puerto Rico, such as American cheese replacing the use of traditional white cheese, and white bread replacing the consumption of fresh Italian bread.

#### Environmental Influences on Dietary Patterns

Environmental differences between sending and receiving communities also affects dietary patterns. For Puerto Ricans from rural areas, the move to an urban environment alters the foods available for purchase, and affects the cooking methods used.

Respondents abandoned the consumption of some traditional foods because they were unavailable, inferior or too expensive in Hartford. Cooking methods that are outdoor activities and common in Puerto Rico, such as grilling and pit-roasting, are not easily transferred to a cold urban environment.

The structure of the Frog Hollow neighborhood affects the diet of Puerto Ricans. The development of suburban areas has included the movement of many large supermarkets to suburban areas, and has left inner city residents with fewer and smaller supermarkets. This results in a greater reliance on smaller neighborhood *bodegas* to meet daily food needs.

Although these stores are abundant, convenient and provide both fresh and shelf food items, as well as traditional Puerto Rican foods, inner city supermarkets and small

privately owned markets do not have the variety of foods available in larger stores, especially in terms of fresh produce. These establishments are also often more expensive than larger food stores, and informants reported these neighborhood establishments are known to raise prices when welfare payments are released. Regardless of the negative aspects of these local stores, inner city residents without access to transportation must make most of their purchases close to home, or use the city's bus system. Although buses do serve the suburbs of Hartford where supermarkets are concentrated, travel on the bus with children or in the winter is time-consuming and inconvenient. Families traveling by foot or on the bus are also limited in the quantity of food they can purchase. This reduces the ability to purchase food in bulk, which would save both time and money.

Confrontations with new foods in local food and eating establishments also bring new dietary choices into the food culture of immigrants (Burns 1993). Puerto Ricans in Hartford are exposed to markets and restaurants that offer Japanese, Chinese, Colombian, Mexican, Italian, Jamaican, Indian, and Brazilian foods, just to name a few. American eating institutions such as diners, fast-food restaurants, and pizza stands also influence food choices and diet.

#### Comparisons with Other Ethnic Groups

Comparisons between Puerto Ricans and other ethnic groups can uncover similarities and differences in dietary patterns and dietary changes among immigrants to the United States.

Puerto Ricans in Hartford were found to be consuming both Puerto Rican and American foods, but report the consumption of Puerto Rican food has decreased. Research among other ethnic groups has also found the consumption of both American

and traditional foods among populations living in the continental United States. Research among Korean Americans showed they consumed both Korean and American foods (Lee 2000). However, Korean American were found to consume twice as much Korean food than American food, whereas Puerto Ricans in this project, except for the least acculturated, consumed a more similar amount of Puerto Rican and American food. This may be due to Puerto Rican's greater familiarity with American foods, regardless of their birthplace, because of the powerful cultural influence of the U.S. in Puerto Rico, as well as the greater similarity between Puerto Rican and Euro-American foods. Extended interaction with American society and increased familiarity with American foods has been found to increase the consumption of American foods and decreased the consumption of traditional foods among Asian immigrants in the U.S. (Lee 2000).

While Puerto Ricans are continuing to prepare Puerto Rican food in their households, the preparation techniques and ingredients used have changed to include processed ingredients or already-prepared take-out foods. This is similar to research findings among Mayan Guatemalan immigrants in Florida who showed a change from homemade corn tortillas to store-bought, packaged ones (Burns 1993).

U.S.-born Puerto Rican women, those who had migrated away from the Puerto Rico at a young age, or those separated from their families because of migration or marriage, reported they had lost the knowledge needed to prepare some traditional foods. These women reported they would cook these foods if they knew how. This is similar to Korean Americans who reported they would eat more Korean foods if they knew how to prepare them (Lee 2000).

### Structural Causes of Poverty

Although this project concentrated on individual variables, such as level of acculturation, and household variables, such as household composition, to study the life situations of low-income Puerto Rican families, larger societal structures also influence the socioeconomic status of immigrants in the U.S. Differences in economy, politics, class structure, and gender structure results in differing economic opportunities. The relative economic prosperity of receiving communities are linked to the socioeconomic status of immigrants within these communities. For example, in 1989, Puerto Ricans in relatively affluent communities in California and Florida had mean household incomes of \$12,032 and \$9,267 respectively, or 79.5% and 67.3% of the mean household income of the overall population. In the same year, Puerto Ricans in economically depressed areas in Pennsylvania, Connecticut and Massachusetts had much lower mean household incomes. Puerto Ricans in Hartford had a mean household income of only \$6,095, or 32.6%, of mean household income for the entire population (Rivera-Batiz and Santiago 1996).

Like other areas of the northeastern United States, economic transformations in Hartford have resulted in stratification of the Puerto Rican community, with some becoming incorporated into white-collar employment, accompanied with declining economic opportunities for Puerto Rican women with lower educational and skill levels (Colon-Warren 1996). This split between upwardly mobile and poor Puerto Ricans leaves many women, especially female household heads, trapped in an economic structure that does not offer them economic promise or opportunities for advancement.



However, Puerto Ricans continue to migrate to Hartford, illustrating the persistence of socially, culturally, politically and historically rooted, established migration streams.

#### Welfare Reform: The Temporary Family Assistance Program (TFA)

The Personal Responsibility and Work Opportunity Reconciliation Act, passed in 1996, ends the sixty-year entitlement of federal assistance for the poor, and replaces it with two block grants which give states almost total control over the dispersion of funds. Most welfare assistance will come from one grant, the Temporary Assistance for Needy Families (TANF), set at \$16.4 billion a year through 2002. TANF includes Job Opportunities and Basic Skills (JOBS) and General Assistance Funds. States will divide this grant among recipients through direct financial aid as well as provide assistance in finding and keeping employment (education, job training and transportation). However, the bill removes the requirement that states provide childcare to families in the work programs.

One of the major changes the Welfare Reform Bill brought is a time limit of five years in assistance for low-income individuals and families. All states were required to have 20% of their cash aid recipients in job training or working in 1997. A 5% increase in this figure is required each year until 2002, when half of recipients are expected to be working. Within these five years time limits, each welfare recipient is expected to find a job within two years. Job training, looking for a job and community service can count as work for a limited time.

The welfare reform bill also reduces food stamp spending by an estimated \$27 billion, or 20%, over six years, and new ways of calculating income makes fewer people

eligible. The bill also cuts \$3 billion from child nutrition programs, such as meal support for childcare centers, but it maintains the school lunch program.

### Welfare Reform in Connecticut

Connecticut's welfare reform policy, "Jobs First", began in January 1996. The main goal of this policy is to move recipients off assistance and into paid employment. The Temporary Family Assistance Program (TFA) replaced Aid to Families with Dependent Children (AFDC). TFA provides only short-term assistance, with an emphasis on the earliest possible labor market participation. The policy also includes incentives to encourage participants to gain and maintain employment. Participants can keep more of their assets, earnings and child support payments without a corresponding decrease in their payments. Other services, such as childcare and medical assistance, are available to participants for longer periods.

The Temporary Family Assistance Program has a twenty-one month time limit, with six-month extensions for families whose every attempt at gaining employment has been unfulfilled. Extensions were available to recipients who were looking for work or who were earning less than their monthly checks. Those cut from benefits will be eligible for Medicaid and childcare benefits for two years. Payments for children conceived while participants are receiving benefits were reduced to only an additional fifty dollars per month. Single adults can collect general assistance for six months in the first year, with the number of months decreasing every year after for three years. After three years, the individual would no longer be eligible for general assistance. If employable recipients do not have a job within the total five-year time limit, they will be cut off from assistance completely, including medical coverage.

From October 1997 to November 1998, approximately twenty-one thousand welfare recipients in Connecticut reached the end of their twenty-one month time limit for benefits (Halloran and Julien 1997). Between August 1996 and June 1999, Connecticut's welfare caseload dropped 47.6% from a little over 159,000 to 83,400. Food stamp participation in Connecticut dropped by 7.1% from 1996 to 1998. Over ten thousand people left welfare between June 1997 and May 1998 because their earnings were high enough to disqualify them from cash benefits (Halloran and Julien 1998).

In 1998, these changes left more than three hundred families with no means of support because they had been cut off from cash assistance. Most remained eligible for food assistance and medical services (Halloran and Julien 1998). Hundreds of appeals for extensions and concern from politicians for the fate of those cut off from assistance led to the creation of a safety net program that allocated \$6.8 million over two years to help recipients pay rent, buy food and clothing and acquire paid employment, job training, or health care services.

In the context of economic restructuring and stratification in the northeastern United States, the welfare policies of the 1990's are "requiring work without ensuring the availability of jobs that provide adequate livelihoods for all groups of earners may be reinforcing a system that borders on servitude" (Colon-Warren 1996:133).

During the time span of this project, the first group of TFA recipients reached their twenty-one month time limit. Ethnographic fieldwork showed the complex web of problems and barriers to paid employment for many welfare recipients that leave them unable to meet their deadlines. Barriers to finding employment include a lack of childcare assistance, language barriers, physical and mental health problems, and low educational

levels. If employment can be found, it is difficult for participants to work consistently because of childcare responsibilities, lack of personal transportation, lack of resources for clothes, money for public transportation, and other costs associated with employment. Unexpected life changes, such as unplanned moves because of condemnation of buildings, evictions because of the inability to pay rent, health problems in themselves or their children, also make consistent participation in paid employment problematic. Domestic violence, substance abuse and legal difficulties also contribute to life, and therefore, employment, instability.

Changes in the structure of the welfare system also affected recipients in Hartford. For example, the replacement of paper food stamps that resemble money, have been replaced with plastic cards resembling credit and debit cards. While having the advantages of automated processing and reducing any embarrassment caused from presenting food stamps for payment, these changes also confuse program participants whose economic status leaves them unfamiliar with automated banking cards or credit cards. Furthermore, some smaller neighborhood markets, where inner city Puerto Ricans do much of their daily shopping, do not have the appropriate technology to accept credit cards or any sort. Furthermore, these changes were initiated with little or no explanation of their use to recipients.

### Dietary Recommendations

Based on this study, several dietary recommendations can be made for low-income Puerto Rican families.

This study showed changes in consumption patterns can be positive or negative, depending on what specific characteristics of one's diet are retained and what new eating

behaviors develop. In this light, nutritional campaigns should focus on four areas. First, messages should encourage the retention of beneficial consumption patterns that are part of the immigrant's traditional dietary patterns. In this population, beneficial patterns included the consumption of complex carbohydrates, such as rice, bread, and *viandas*, accompanied by small meat portions. Relatively low consumption of desserts, consumption of fruit and fruit juice, and beneficial snacking patterns, such as serving juice instead of soda or crackers instead of chips, were also observed.

Next, nutritional campaigns should stress the elimination of detrimental consumption patterns that are currently part of the immigrant's diet. In the Puerto Rican context, these unhealthy patterns include high fat cooking methods, such as deep frying, the almost universal use of whole milk, the consumption of high fat, processed meats such as Vienna sausages, and lack of variety in vegetable consumption. The use of processed foods, including canned meats, vegetables and fruits, and high sugar beverages, should be discouraged.

Nutritional messages should also encourage the adoption of new beneficial consumption patterns. For Puerto Ricans coming to the continental United States, these could include increased consumption of cruciferous vegetables, such as broccoli, green leafy vegetables, such as darker lettuces and spinach, and beta-carotene vegetables, such as carrots. The use of low fat milk and dairy products, easy techniques at cutting fat, such as removing skin from chicken and lower-fat cooking methods, would also positively affect the diet of Puerto Ricans.

Last, attempts at improving nutritional status for immigrants to the United States should also discourage the adoption of detrimental consumption patterns the immigrant

confronts. Such detrimental patterns include unhealthy snacking patterns, such as the consumption of salty snacks, sweets and desserts, fast food, processed foods, and soda and artificially fruit-flavored, high sugar drinks. Incomplete meals and skipping meals should also be discouraged.

Women in Hartford could also benefit from educational programs that teach frugal shopping techniques. Participant observation revealed some women in Hartford rely heavily on processed foods, snack and convenience foods, and restaurant foods as key components of the daily diet for themselves and their families. Processed and convenience foods are often less healthful than fresh choices, and foods purchased from restaurants are often nutritionally detrimental. Furthermore, these eating patterns include costlier food choices that can have severe impacts on the limited resources of low-income households. Instruction in cost-conscious shopping techniques and household budgeting can help these low-income women redirect their funds to purchases that would extend their budgets, as well as improve nutritional status.

Educational programs on money-saving shopping should be coupled with cooking instruction. Migration and severed kin networks have led to the loss of knowledge concerning food preparation for some Puerto Ricans on the mainland. For example, young female household heads and women who migrated away from family reported they have lost knowledge and cooking skills, and do not know how to prepare some foods they remember from their childhoods. Instruction in the preparation of foods that are less expensive, such as cooking dry beans instead of canned, or foods that create a large amount of food sufficient to feed an entire household, such as chicken or seafood soup (*asopao*), could expand the repertoire of food choices for the entire household. Such

programs could be initiated with the use resources within the Puerto Rican community of Hartford. For example, older generations and those raised in Puerto Rico could participate in programs that instruct younger Puerto Rican women in traditional preparation techniques.

### Policy Implications

Social assistance programs targeting low-income families must address the economic heterogeneity of populations defined as low-income, and the resulting heterogeneity of their problems and needs. Programs aimed at positively influencing dietary patterns among low-income families should also place diet and nutrition within the larger context of physical and mental health. Other health issues and conditions, such as diabetes, pregnancy, substance abuse, depression, and lead poisoning, affect dietary patterns and nutritional status.

Structural factors affecting the diet of Hartford residents must also be addressed. The political and economic bias toward suburban development at the detriment of inner – city communities leaves Puerto Ricans and others in neighborhoods with inadequate resources to serve their residents. Redevelopment and city planning policies have fragmented Hartford's Puerto Rican communities in the past, and urban redevelopment and housing program continue to disrupt the cohesion and stability of ethnic neighborhoods. Housing developments that compartmentalize and isolate families limit women's opportunities for social networking. Reforms in neighborhood and housing planning and structure, and social programs that facilitate the creation of social networks among low-income women, could benefit them and their families psychologically, economically and nutritionally.

### Limitations of the Research

This project had several limitations and weaknesses. First, because families were required to allow the researchers into their homes for an extended period of time, women were unwilling to participate in the study on weekend days. This means the data on the variability of dietary intake between the weekdays and weekends was not part of this analysis. Another limitation involved the food frequency questionnaire. This instrument did not include data on portion sizes, so quantitative data reveals only how many times per day a particular food was consumed, but not how much of each food was consumed. In addition, by design, this project was limited to low-income families in order to apply knowledge gained to those in greatest need. However, because dietary patterns and socioeconomic status are inextricably linked, as are acculturation and socioeconomic status, these data cannot necessarily be extrapolated to Puerto Ricans of other social classes.

### Areas for Future Research

The study of dietary patterns among Hispanics in different parts of the United States has revealed regional differences (Ballew and Sugerman 1995). The focus on a single research area in this project can be complemented with comparative studies in other settlement areas, as well as comparisons of Puerto Ricans in the continental U.S. and in Puerto Rico. Longitudinal studies that track dietary patterns in Puerto Rico and after migration to the mainland can provide precise data on dietary changes that may be overlooked or forgotten by respondents recalling past events. Studies over time are also needed to investigate the effects of welfare reform policies on household composition, particularly household extension, and on the nutritional status of low-income families.



Furthermore, comparisons of dietary change among different social classes can expand the knowledge of the processes of dietary change.

Household data in this project revealed the complex living arrangements of low-income Puerto Ricans in the United States. Further study on the household size and composition and its relation to diet and nutrition is still needed. For example, there is still much to learn about less common household forms, such as sister-based households, where two or more sisters and their children reside in a single household, or those where grandparents are the household heads and primary caretakers of the household's children. Longitudinal studies that track changes in household composition and resulting changes in diet are also needed to address the ever-changing nature of family patterns and household composition.

# APPENDIX A CARETAKER, CHILD AND HOUSEHOLD CHARACTERISTICS

Caretaker Characteristics

HH #	Age	Relationship to Study Child	Educational Level	Marital Status	EAMs	Birthplace	Age at First Arrival	Years Since First Arrival	Interview Language
1	30	Mother	Some college	Married	.20	PR	23	7	Spanish
2	31	Mother	< 8 <sup>th</sup> grade	Married	.49	PR	29	2	Spanish
3	47	Mother	HS grad or GED	Consensual	.50	PR	19	28	Spanish
4	31	Mother	Some high school	Married	.15	PR	1	30	English
5	20	Mother	HS grad or GED	Consensual	.09	PR	2	18	English
6	25	Mother	Some high school	Consensual	.52	PR	19	6	Spanish
7	21	Mother	< 8 <sup>th</sup> grade	Single	.62	PR	19	2	Spanish
8	20	Mother	HS grad or GED	Consensual	.16	PR	6	14	English
9	20	Mother	HS grad or GED	Single	.34	CT	n/a	n/a	Spanish
10	22	Mother	< 8 <sup>th</sup> grade	Single	.58	PR	18	4	Spanish
11	32	Mother	< 8 <sup>th</sup> grade	Single	.71	PR	30	2	Spanish
12	22	Mother	HS grad or GED	Single	.29	PR	15	7	Spanish
13	28	Mother	< 8 <sup>th</sup> grade	Single	.52	PR	21	7	English
14	20	Mother	< 8 <sup>th</sup> grade	Single	.41	PR	6	14	English
15	20	Mother	< 8 <sup>th</sup> grade	Single	.39	CT	n/a	n/a	English
16	20	Mother	Some high school	Single	.38	PR	13	7	Spanish
17	25	Mother	HS grad or GED	Consensual	.57	PR	19	6	Spanish
18	19	Mother	Some high school	Single	.50	PR	15	4	Spanish
19	24	Mother	HS grad or GED	Single	.15	PR	11	13	English
20	43	Grandmother	< 8 <sup>th</sup> grade	Single	.77	PR	33	10	Spanish
21	22	Mother	Some high school	Divorced	.39	PR	9	13	Spanish
22	22	Aunt	Some college	Separated	.45	PR	13	9	English

Child Characteristics

HH #	Child Sex	Child Age	Child Birthplace
1	Female	4	CT
2	Male	3	CT
3	Female	4	CT
4	Female	3	CT
5	Male	3	NY
6	Female	3	CT
7	Male	3	PR
8	Male	3	CT
9	Male	3	CT
10	Female	3	CT
11	Male	4	PR
12	Female	5	CT
13	Female	4	PA
14	Male	3	CT
15	Male	4	CT
16	Female	3	CT
17	Female	4	CT
18	Male	3	CT
19	Male	3	PR
20	Female	4	CT
21	Male	3	PR
22	Female	4	CT

Household Characteristics

HH #	Number of Persons	Household Type	Household Composition (in relation to study child)
1	4	Nuclear family	Mother, father, study child (F), one brother
2	4	Nuclear family	Mother, father, study child (M), one brother
3	3	Nuclear family	Mother, father, study child (F)
4	8	Nuclear family	Mother, father, study child (F), three sisters, two brothers
5	4	Nuclear family	Mother, father, study child (M), one sister
6	6	Nuclear family	Mother, father, study child (F), two brothers, one sister
7	4	Nuclear family	Mother, stepfather, study child (M), one sister
8	4	Nuclear family	Mother, stepfather, study child (M), one brother
9	4	Female-headed	Mother, study child (M), one brother
10	4	Female-headed	Mother, study child (F), one brother, one sister
11	5	Female-headed	Mother, study child (M), one brother, two sisters
12	4	Female-headed	Mother, study child (F), one brother, one sister
13	6	Female-headed	Mother, study child (F), four sisters
14	6	Extended FHH	Mother, Aunt, study child (M), one brother, one sister, one cousin
15	4	Extended FHH	Grandmother, mother, study child (M), one sister
16	6	Extended FHH	Grandmother, mother, study child (M), one brother, two uncles
17	7	Extended FHH	Grandmother, mother, study child (F), one sister, two cousins, friend of mother
18	4	Extended with FS-H	Grandmother, grandfather, mother, study child (M)
19	4	Extended with FS-H	Grandmother, grandfather, mother, study child (M)
20	4	Extended family	Grandmother, mother, mother's partner, study child (F)
21	8	Extended family	Grandmother, grandfather, mother, mother's partner, study child (F), one sister, two uncles
22	11	Extended family	Grandmother, grandfather, study child (F), one brother, two sisters, two aunts, three uncles

## APPENDIX B SEMI-STRUCTURED INTERVIEW

### Informed Consent

The Hispanic Health Council and the University of Connecticut are concerned with how well Puerto Rican children in Hartford are eating and growing. This study is looking at how living in the United States affects the way Hispanics eat and their nutritional status. In addition, we are very interested in the amount of food children eat over several days. The results of this study will be used to benefit the health and well-being of children in your community.

This study will entail several parts. First, we will ask for some information about you, your family and your household. The second part of the study will look at your interaction and participation in the Puerto Rican culture and community of Hartford. The third part of this study is looking at the ways in which living in the U. S. affects the way Hispanics eat. Here, I will be asking questions about you and your family's diet, including the kinds of foods you eat, how often you and your child eat them, and how what you eat has changed over time. To assure accuracy, answers to these questions will be tape recorded. For the final part of the study, I will be recording and measuring exactly what your child eats during two days. This will entail spending your child's waking hours with you and your family (from when your child wakes up to when he/she goes to sleep), literally following your child everywhere he/she goes and weighing and recording everything he/she eats.

The only risk to you is any inconvenience associated with our presence in your home for several days. We will do our best to be inconspicuous and to not upset your normal routine. In fact, the accuracy of the results of this project depends on you going about your normal day, without changing your behavior because of our presence.

Because of your generosity in allowing us into your home, we will compensate you for your time and assistance with \$40.00 and educational materials on nutrition and community services. We will also give a toy to your child. You may withdraw from the study at any time, but you will receive only partial payment for your participation. Only those who complete the entire project will receive full compensation.

**Your participation in this study is completely voluntary, and you do not have to answer any questions you do not wish to. We will not use your name or your child's name in any publications or reports of this project - you will remain completely anonymous.** We will, however, provide you with information on your child upon your request.

If you have any questions or concerns, please feel free to contact the directors of this study, Dr. David Himmelgreen at (860) 527-0856 or Dr. Rafael Perez-Escamilla at (860) 486-5073.

We deeply appreciate your help and cooperation in conducting this study. Please sign below if you agree to participate in this project.

_____ <i>Signature of Primary Care Taker</i>	_____ <i>Date</i>
<i>Interviewer</i> <i>Name:</i> _____ <i>Date of</i> <i>Interview:</i> _____ <i>Location of</i> <i>Interview:</i> _____	

<b>Interviewer Instructions:</b>
----------------------------------

1. Although possible answers are provided on the questions below, let the respondent answer the questions before you probe with our possible answers. This will allow a greater range and therefore more accurate responses to be given. Write in any novel answers.
2. Allow respondent to answer questions with more than one response.
3. Tape record answers to open-ended questions.
4. Insert the child's name where you see "(the child)".

# **A. DEMOGRAPHICS/SOCIOECONOMIC STATUS**

Respondent's Name: \_\_\_\_\_

Code #: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Sex: \_\_\_\_\_ Age: \_\_\_\_\_

Child's Name: \_\_\_\_\_

Child's Sex: \_\_\_\_\_ Child's Age: \_\_\_\_\_

1. In which language would you prefer to be interviewed?

01 English

02 Spanish

03 Either English or Spanish

Marital Status:

2. What is your current marital status?

01 Single/no partner

02 Married

03 Common Law

04 Separated

05 Divorced

06 Widowed

77 Other: \_\_\_\_\_

88 Don't know

99 Refused

Education:

3. What is the highest grade you reached in school?

01 No formal schooling

02 Eighth grade or less

03 Some high school

04 High school graduate or GED equivalency

05 Trade or technical training Specify highest grade reached:

\_\_\_\_\_

06 Some college

07 College graduate

08 Post-graduate

99 Refused

The Household:

4. Do you rent or own this apartment/house?

01 Rent

02 Own

03 Borrow

99 Refused

5a. How many people, including you, live in this house/apartment? Total #: \_\_\_\_\_  
(99 Refused)

5b. Who does this include?:

Name	Sex	Age	Relationship to Respondent	Occupation/Job
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Living Standards:

6. Do you have access to a:

telephone?	01 Yes	02 No	99 Refused
radio?	01 Yes	02 No	99 Refused
stereo/CD player?	01 Yes	02 No	99 Refused
television?	01 Yes	02 No	99 Refused
computer?	01 Yes	02 No	99 Refused
car?	01 Yes	02 No	99 Refused
refrigerator?	01 Yes	02 No	99 Refused
microwave?	01 Yes	02 No	99 Refused
washing machine?	01 Yes	02 No	99 Refused
stove?	01 Yes	02 No	99 Refused
toaster?	01 Yes	02 No	99 Refused
sewing machine?	01 Yes	02 No	99 Refused
dishwasher?	01 Yes	02 No	99 Refused



Head of Household: (Interviewer: If there is more than one household head, record **all** household heads. This will not affect interview because we are interviewing the **primary care taker**, not the household head, although of course they may be the same person.)

7. Do you consider yourself the head of the household, i.e., the person who provides economically for your family?

01 Yes (Skip to 10)

02 No

99 Refused

8. Who is the head of the household? \_\_\_\_\_

Employment:

9. What is the current employment status of the household head?

01 Employed full time Job: \_\_\_\_\_

02 Employed part time Job: \_\_\_\_\_

03 Full-time homemaker/caretaker

04 Student(not working)

05 Unemployed(looking for work)

06 Unemployed(not looking for work)

07 Disabled due to poor health

08 Retired

77 Other: \_\_\_\_\_

99 Refused

10. What is your present employment status?

01 Employed full time Job: \_\_\_\_\_

02 Employed part time Job: \_\_\_\_\_

03 Full-time homemaker/caretaker

04 Student(not working)

05 Unemployed(looking for work)

06 Unemployed(not looking for work)

07 Disabled due to poor health

08 Retired

77 Other: \_\_\_\_\_

99 Refused

11. Do you do anything to make additional income in your home (e.g., sewing, cooking, secretarial work, babysitting, care of elderly, etc.)?

01 Yes Specify activity: \_\_\_\_\_

02 No

99 Refused

Nativity and Migration Patterns:

12a. Where were you born?

City: \_\_\_\_\_

Country: \_\_\_\_\_

99 Refused

12b. Is that area:

01 Urban (large city = population &gt; 100,000)?

02 Semi-urban (large town, small city = 10,000 to 100,000)?

03 Rural (small town, country setting = population &lt; 10,000)?

99 Refused

12c. How old were you when you came to the continental U.S.? \_\_\_\_\_ yrs old

99 Refused

12d. Where did you grow up?

City: \_\_\_\_\_

Country: \_\_\_\_\_

99 Refused

12e. Is that area:

01 Urban (large city = population &gt; 100,000)?

02 Semi-urban (large town, small city = population 10,000 to 100,000)?

03 Rural (small town, country setting = population &lt; 10,000)

99 Refused

13a. Where was (the child) born?

City: \_\_\_\_\_

Country: \_\_\_\_\_

88 Don't know

99 Refused

13b. Is that area:

01 Urban (large city = population &gt; 100,000)?

02 Semi-urban (large town, small city = 10,000 to 100,000)?

03 Rural (small town, country setting = population &lt; 10,000)?

99 Refused

(Skip to 14a if respondent was born on the mainland.)

13c. How long did you live on the mainland before (the child) was born?

\_\_\_\_\_ months \_\_\_\_\_ years

14a. Where was your mother born?

City: \_\_\_\_\_

Country: \_\_\_\_\_

88 Don't know

99 Refused

14b. Is that area:

01 Urban (large city=population>100,000)?

02 Semi-urban (large town, small city=10,000 to 100,000)?

03 Rural (small town, country setting=population<10,000)?

99 Refused

14c. Where was your father born?

City: \_\_\_\_\_ (If born in the continental U.S., skip 15a and 15b)

Country: \_\_\_\_\_

88 Don't know

99 Refused

14d. Is that area:

01 Urban (large city=population>100,000)?

02 Semi-urban (large town, small city=10,000 to 100,000)?

03 Rural (small town, country setting=population<10,000)?

99 Refused

(If respondent's parents were born in the continental U.S., skip to 16a)

15a. Has your mother lived in the continental U.S.?

01 Yes Specify for how long: \_\_\_\_\_

02 No

88 Don't know

99 Refused

15b. Has your father lived in the continental U.S.?

01 Yes Specify for how long: \_\_\_\_\_

02 No

88 Don't know

99 Refused

16a. Have you returned to Puerto Rico since you moved to the mainland?

01 Yes

02 No (Skip to 17a)

99 Refused

16b. Approximately how often do you return to Puerto Rico?

- 01 Twice a year or more
- 02 Once a year
- 03 Once every two years
- 04 Once every three years
- 05 Once every four years
- 06 Once every five years
- 07 Less than once every five years
- 99 Refused

16c. Since first moving to the mainland, how many times have you returned to Puerto Rico and stayed longer than one month?

- 01 Once
- 02 Two to three times
- 03 Four to five times
- 04 Six times or more
- 99 Refused

16d. When did you last return to Puerto Rico?

Month \_\_\_\_\_ Year \_\_\_\_\_

16e. On your last trip to the Island, where in Puerto Rico did you go?

Specify city or town: \_\_\_\_\_

16f. On your last trip to the Island, how long did you stay there?

- 01 Less than one month
- 02 One to two months
- 03 Three to six months
- 04 Seven months to one year
- 05 More than one year
- 99 Refused

16g. On your last trip to Puerto Rico, why did you return?

- 01 Visit family and friends
  - 02 Take care of family member(s)
  - 03 School
  - 04 Work/Business
  - 05 Special event (e.g., wedding, funeral, graduation, etc.)
  - 06 Health reasons
  - 07 Other Specify reason: \_\_\_\_\_
  - 99 Refused
- (Skip to 18a.)

17a. Do you plan to return to Puerto Rico?

01 Yes

02 No (Skip to 18a)

99 Refused

99 Refused

17b. In the next three years, how often do you plan to return to Puerto Rico?

01 Once

02 Twice

03 Three times

04 Four times

05 Five or more times

99 Refused

Social Networks:

18a. Do you have family and/or friends living locally?

01 Yes

02 No (Skip to Part B: Acculturation Instrument)

99 Refused

18b. Please tell me their first names, ages and their relationship to you.

- |     |       |           |                    |
|-----|-------|-----------|--------------------|
| 1.  | _____ | Age _____ | Relationship _____ |
| 2.  | _____ | Age _____ | Relationship _____ |
| 3.  | _____ | Age _____ | Relationship _____ |
| 4.  | _____ | Age _____ | Relationship _____ |
| 5.  | _____ | Age _____ | Relationship _____ |
| 6.  | _____ | Age _____ | Relationship _____ |
| 7.  | _____ | Age _____ | Relationship _____ |
| 8.  | _____ | Age _____ | Relationship _____ |
| 9.  | _____ | Age _____ | Relationship _____ |
| 10. | _____ | Age _____ | Relationship _____ |

18c. Do you lend or borrow money from any of these individuals?

01 Yes

02 No

99 Refused

18d. Do you lend or borrow goods (e.g., food, household items, clothes) from these individuals?

01 Yes

02 No

99 Refused

18e. Do you do or receive services (e.g., errands, babysitting, cooking) from these individuals?

01 Yes

02 No

99 Refused

### **Food Sources and Purchasing Decisions:**

1. At what store do you (or the person who shops for groceries) buy most of the food for your household?

Name of store: \_\_\_\_\_

66 Not applicable

88 Don't know

99 Refused

2. What type of store is that?

01 A supermarket

02 A convenience store (e.g., Seven-Eleven)

03 A small neighborhood market/grocery store (e.g., El Gitano, El Campesino)

04 A food warehouse (e.g., BJ's, Sam's)

77 Other Specify: \_\_\_\_\_

88 Don't know

99 Refused

3. Where is the store located? \_\_\_\_\_

88 Don't know

99 Refused

4. Do you buy food from street stands?

01 Yes

02 No

88 Don't know

5. Do you read the food labels when you are shopping?

01 Yes

02 No (Skip to 8)

99 Refused

6. Do the food labels influence your food purchases?

01 Always

02 Sometimes

03 Never (Skip to 8)

99 Refused

7. List, in order of importance, the three parts of the food label that most influence your purchasing decisions (e.g., Calories, total fat, saturated fat, cholesterol, ingredients, sodium)

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_

**Nutrient Supplements:**

8. Do you take a nutrient supplement?

01 Yes Specify: \_\_\_\_\_

02 No

99 Refused

9. Does your child take a nutrient supplement?

01 Yes Specify: \_\_\_\_\_

02 No

99 Refused

10. Do you use nutrition supplements or herbal remedies from botanicas?

01 Yes Specify: \_\_\_\_\_

02 No

99 Refused

**Food Assistance:** *In this section we try to determine your knowledge and use of the following food assistance programs: Food Stamps, WIC Program, Head Start, School Breakfast, School Lunch, Summer Food, Food Banks, Salvation Army, and others.*

11a. Have you ever received food stamps?

01 Yes

02 No (Skip to 12c)

88 Don't know

99 Refused

11b. Are you currently receiving food stamps?

01 Yes

02 No

88 Don't know

99 Refused

11c. Why doesn't your household receive Food Stamps now? Is it because... (Check all that apply)

01 Difficult to apply

02 Applied, but have not received an answer

03 Feel uncomfortable using Food Stamps

04 Problems with Food Stamps office staff

- 05 Lack of transportation
- 06 Food Stamp benefits have stopped
- 07 No longer need Food Stamps
- 66 Not applicable
- 77 Other, Specify: \_\_\_\_\_
- 88 Don't know
- 99 Refused

12a. Have you ever received AFDC?

- 01 Yes
- 02 No (Skip to 13c)
- 88 Don't know
- 99 Refused

12b. Are you currently receiving AFDC?

- 01 Yes
- 02 No
- 88 Don't know
- 99 Refused

12c. Why is your household not receiving AFDC now. Is it because... (Check all that apply)

- 01 Difficult to apply
- 02 Applied but have not received answer
- 03 Feels uncomfortable using AFDC
- 04 Problems with AFDC office staff
- 05 Lack of transportation
- 06 AFDC benefits have stopped
- 07 No longer need AFDC
- 66 Not applicable
- 77 Other Specify: \_\_\_\_\_
- 88 Don't know
- 99 Refused

**WIC Program:** *The Supplemental Food Program for Women, Infants and Children, often called WIC, provides food and food vouchers for pregnant or breast-feeding women and families with infants or children.*

13a. Did you receive WIC Program benefits either during your pregnancy or after this child's birth?

- 01 Yes, both
- 02 Yes, during pregnancy only
- 03 Yes, after birth only (Skip to 14c)
- 04 Neither (Skip to 15a)



13b. In what trimester of your pregnancy did you start receiving WIC benefits?

Enter trimester: \_\_\_\_\_

66 Not applicable

88 Don't know

99 Refused

13c. Could you tell me why you are not receiving WIC benefits now? Is it because...

(Check all that apply)

01 Difficult to apply

02 Applied, but have not received answer

03 Feels uncomfortable using WIC benefits

04 Problems with WIC Program staff

05 Lack of transportation

06 Did not apply because respondent believed he/she is not eligible

07 Applied, but respondent is ineligible due to high income

08 Applied, but child is ineligible because of insufficient medical or nutritional need

09 Applied, but child is too old

66 Not applicable

77 Other Specify: \_\_\_\_\_

88 Don't know

99 Refused

#### **Infant WIC:**

14a. Has(the child)ever received WIC benefits?

01 Yes

02 No (Skip to 16a)

66 Not applicable

88 Don't know

99 Refused

14b. Is(the child)currently receiving WIC benefits?

01 Yes

02 No (Skip to 16a)

66 Not applicable

88 Don't know

99 Refused

14c. How old was (the child) when he/she started receiving WIC benefits?

Months \_\_\_\_\_ Weeks \_\_\_\_\_ Days \_\_\_\_\_

(If respondent answered question 15c, skip to 16a).

14d. How old was (the child) when he/she stopped receiving WIC benefits?

Months \_\_\_\_\_ Weeks \_\_\_\_\_ Days \_\_\_\_\_

**Head Start Pre-School Age Program (3-4 Year Olds):**

15a. Has (the child) ever participated in the Head Start Program?

01 Yes

02 No (Skip to 17a)

88 Don't know

99 Refused

15b. Is (the child) currently participating in the Head Start Program?

01 Yes

02 No

66 Not applicable

88 Don't know

99 Refused

15c. How long has (the child) participated in the Head Start Program?

Enter time span \_\_\_\_\_

66 Not applicable

88 Don't know

99 Refused

**Other Food Assistance:**

16a. Have you ever obtained food assistance from a Food Bank, the Salvation Army or a soup kitchen?

01 Yes

02 No (Skip to open-ended questions)

77 Other: \_\_\_\_\_

88 Don't know

99 Refused

16b. Are you or your family currently obtaining food assistance from a food bank?

01 Yes

02 No

88 Don't know

99 Refused

16c. Are you or your family currently obtaining food assistance from the Salvation Army?

01 Yes

02 No

88 Don't know

99 Refused

16d. Are you or your family currently obtaining food assistance from a soup kitchen?

- 01 Yes
- 02 No
- 88 Don't know
- 99 Refused

**Breastfeeding:**

17. Were you employed outside of your home when (the child) was born?

- 01 Yes
- 02 No

18. Did you breastfeed the child that was born prior to (the child)?

- 01 Yes
- 02 No (Skip to 20)

19. For how long?

\_\_\_\_\_ Months \_\_\_\_\_ Weeks \_\_\_\_\_ Days

20. Were you breastfed as a child?

- 01 Yes
- 02 No
- 88 Don't know
- 99 Refused

21. Did you ever breastfeed (the child)?

- 01 Yes
- 02 No (Skip to 25)
- 66 Does not apply
- 88 Don't know
- 99 Refused

22. Are you currently breastfeeding (the child)?

- 01 Yes
- 02 No
- 66 Does not apply
- 88 Don't know
- 99 Refused

23. How long did you breastfeed (the child)?

\_\_\_\_\_ Months \_\_\_\_\_ Weeks \_\_\_\_\_ Days

24. What made you stop breastfeeding (the child)?

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---



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25. What made you decide NOT to breastfeed?

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(**Interviewer:** If mother responds with “because I did not want to” or “did not feel like it”, etc., probe for a more specific answer).

## APPENDIX C

### ACCULTURATION INSTRUMENT

This instrument views acculturation as a multi-dimensional process. The following questions measure acculturation through: 1) self-identification, 2) language, 3) structural assimilation into U.S. society, 4) political views, 5) ethnic boundaries of social relations, including endogamy and exogamy, 6) media and popular culture, 7) family values, and 8) the importance placed on maintaining ethnic culture.

#### Self Identification

1. How do you identify yourself?

01 Puerto Rican

02 Hispanic or Latino

03 Puerto Rican-American

04 American

05 Black Hispanic

06 Black or African American (does not specify Hispanic)

07 White Hispanic

08 White (does not specify Hispanic)

09 Latin American

10 Spanish

11 Other: \_\_\_\_\_

99 Refused

#### Language

2. Are you...

01 Monolingual, English only (Skip to 5)

02 Monolingual, Spanish only (Skip to 5)

03 Bilingual (English and Spanish)

04 Other: \_\_\_\_\_

99 Refused

3. Do you speak English...

01 Fluently

02 Very well

03 Well

04 Fair

05 Not very well

06 Refused

4. What was the first language you learned to speak?

01 English

02 Spanish

03 Other: \_\_\_\_\_

99 Refused

5. What language do you primarily speak in your home?

01 English

02 Spanish

03 English and Spanish equally

04 Other: \_\_\_\_\_

99 Refused

### Migration History

6. How many generations of your family have lived in the U.S.?

(Interviewer: Explain what a generation is: e.g., your great grandparents, grandparents, parents, the respondent; each one is a generation. Thus, if the respondent's grandparents and parents lived on the mainland, then that is a total of three generations, including the respondent. Do not count the respondent's children.)

01 One

02 Two

03 Three

04 Four

05 Five or more

99 Refused

### Politics

7. To what degree do you follow politics in Puerto Rico?

01 A great deal

02 Somewhat

03 Not too much

04 Not at all

99 Refused

8. Did you vote in the last U.S. national or local election?

01 Yes

02 No

03 Could not vote, but would have if able

99 Refused

Social Relations

9. Is your current employer Latino? (If not employed, skip to 10).

(Interviewer: answer "Yes" if respondent works for an individual, business or organization that is Hispanic. For example, if respondent works for the Hispanic Health Council, the answer would be yes even if their particular supervisor is not Latino).

01 Yes

02 No

88 Don't know

99 Refused

10. Are most of the people you work with Latino?

01 Yes

02 No

88 Don't know

99 Refused

11. Is your spouse/boyfriend/girlfriend Latino?

01 Yes (Skip to 12)

02 No

99 Refused

12. If not Latino, what ethnicity is your spouse/boyfriend/girlfriend?

Specify ethnicity: \_\_\_\_\_

88 Don't know

99 Refused

Think of the first four friends that come to mind, then tell me, for each person, if they are Latino or not:

13a.        01 Latino  
              02 not Latino  
              99 Refused

13b.        01 Latino  
              02 not Latino  
              99 Refused

13c.        01 Latino  
              02 not Latino  
              99 Refused

13d.        01 Latino  
              02 not Latino  
              99 Refused

14. Do you live in a predominantly Latino neighborhood?

01 Yes

02 No  
99 Refused

15. Do you attend a Spanish language/Latino church?

01 Always  
02 Sometimes  
03 Almost never  
04 Never  
66 Not applicable (does not attend any church)  
99 Refused

16. Do you belong to any Latino clubs/organizations (e.g., social, cultural, political, academic or business organizations)?

01 Yes  
02 No  
66 Not applicable (does not belong to any clubs/organizations)  
99 Refused

#### Media/Popular Culture

17. What kind of music do you mainly listen to?

01 Latino (e.g., salsa, merengue, Spanish classics)  
02 non-Latino (e.g., rock and roll, rap, R & B, alternative, country)  
66 Not applicable (does not listen to music)  
99 Refused

18. Do you watch Spanish language/Latino television stations (e.g., *Channel 13-Telemundo*, *Channel 7-Univision*, or *Channel 5-Hartford Public Access*)?

01 Always  
02 Sometimes  
03 Almost never  
04 Never  
66 Not applicable (does not watch any TV)  
99 Refused

19. Do you listen to Spanish language/Latino radio stations (e.g., *Latino 1230*, *Voz Hispana 1530*, *La Puertorriquenisima 1120* or *La Gigante 840*)?

01 Always  
02 Sometimes  
03 Almost never  
04 Never  
66 Not applicable (does not listen to any radio)  
99 Refused

20. Do you read Spanish language/Latino newspapers or magazines (e.g., *El Vocero*, *El Extra News*, *La Voz Hispana*, etc.)?

01 Always



- 02 Sometimes
- 03 Almost never
- 04 Never
- 66 Not applicable (does not read any newspapers/magazines)
- 99 Refused

21. Do you go to Latino night clubs/dance clubs or “Latin nights” at other clubs?

- 01 Often
- 02 Sometimes
- 03 Almost never
- 04 Never
- 66 Not applicable (does not go to any clubs)
- 99 Refused

22. Do you attend Latino cultural events (e.g. concerts, dance performances, art exhibits, lectures, parades, etc.)?

- 01 Often
- 02 Sometimes
- 03 Almost never
- 04 Never
- 66 Not applicable (does not attend any cultural events)
- 99 Refused

23. Do you prepare and/or serve Puerto Rican food in your household?

- 01 Yes
- 02 No (Skip to 24)
- 99 Refused

24. How often do you eat Puerto Rican food at home?

- 01 Every day
- 02 Four to six times a week
- 03 One to three times a week
- 04 Once every two to three weeks
- 04 Once a month or less
- 99 Refused

### Feelings, Values and Attitudes

*Please tell me whether you **strongly agree**, **somewhat agree**, **somewhat disagree**, or **strongly disagree** with the following statements.*

25. I believe my children should know about Puerto Rican history.

(from the Acculturation and Structural Assimilation Scale: San Antonio Heart Study, at [http://riceinfo.rice.edu/projects/Hispanic Health/Acculturation.html](http://riceinfo.rice.edu/projects/Hispanic%20Health/Acculturation.html))

- 01 Strongly agree
- 02 Somewhat agree
- 03 Somewhat disagree

04 Strongly disagree  
 88 Don't know  
 99 Refused

26. My Puerto Rican background is important in defining my personal identity, my beliefs and my values.

(from the Latino Ethnic Attitude Survey, <http://falcon.cc.ukans.edu/~droy/>)

01 Strongly agree  
 02 Somewhat agree  
 03 Somewhat disagree  
 04 Strongly disagree  
 88 Don't know  
 99 Refused

27. I do NOT try to keep in contact with my grandparents, aunts, uncles, or cousins.

01 Strongly agree  
 02 Somewhat agree  
 03 Somewhat disagree  
 04 Strongly disagree  
 88 Don't know  
 99 Refused

28. I hope my children live in Puerto Rico when they grow up.

01 Strongly agree  
 02 Somewhat agree  
 03 Somewhat disagree  
 04 Strongly disagree  
 88 Don't know  
 99 Refused

29. I want my children to know about Puerto Rican art, music and culture.

01 Strongly agree  
 02 Somewhat agree  
 03 Somewhat disagree  
 04 Strongly disagree  
 88 Don't know  
 99 Refused

30. Most likely, I would not date or marry someone that was not Puerto Rican.

01 Strongly agree  
 02 Somewhat agree  
 03 Somewhat disagree  
 04 Strongly disagree  
 88 Don't know  
 99 Refused

31. Even when they are adults, children should live close to their parents.  
(from the Acculturation and Structural Assimilation Scale: San Antonio Heart Study, at [http://riceinfo.rice.edu/projects/Hispanic Health/Acculturation.html](http://riceinfo.rice.edu/projects/Hispanic%20Health/Acculturation.html)).

- 01 Strongly agree
- 02 Somewhat agree
- 03 Somewhat disagree
- 04 Strongly disagree
- 88 Don't know
- 99 Refused

32. I would discourage my children from moving back to Puerto Rico when they grow up.

- 01 Strongly agree
- 02 Somewhat agree
- 03 Somewhat disagree
- 04 Strongly disagree
- 88 Don't know
- 99 Refused

33. I will be disappointed if my children do not speak Spanish.

- 01 Strongly agree
- 02 Somewhat agree
- 03 Somewhat disagree
- 04 Strongly disagree
- 88 Don't know
- 99 Refused

34. Since I live in Hartford now, I do NOT think it is important to follow Puerto Rican customs and ways of life.

- 01 Strongly agree
- 02 Somewhat agree
- 03 Somewhat disagree
- 04 Strongly disagree
- 88 Don't know
- 99 Refused

35. My parents encouraged me to learn about Puerto Rican culture and history.

- 01 Strongly agree
- 02 Somewhat agree
- 03 Somewhat disagree
- 04 Strongly disagree
- 88 Don't know
- 99 Refused

36. I feel more comfortable being around other Puerto Ricans.

- 01 Strongly agree
- 02 Somewhat agree
- 03 Somewhat disagree
- 04 Strongly disagree
- 88 Don't know
- 99 Refused

37. I am worried my children will be too "American".

- 01 Strongly agree
- 02 Somewhat agree
- 03 Somewhat disagree
- 04 Strongly disagree
- 88 Don't know
- 99 Refused

38. I would NOT mind if my children marry someone who is not Puerto Rican.

- 01 Strongly agree
- 02 Somewhat agree
- 03 Somewhat disagree
- 04 Strongly disagree
- 88 Don't know
- 99 Refused

39. It is NOT important to have a close relationship with your extended family (i.e., grandparents, aunts, uncles and cousins).  
(from the Acculturation and Structural Assimilation Scale: San Antonio Heart Study, at [http://riceinfo.rice.edu/projects/Hispanic Health/Acculturation.html](http://riceinfo.rice.edu/projects/Hispanic%20Health/Acculturation.html)).

- 01 Strongly agree
- 02 Somewhat agree
- 03 Somewhat disagree
- 04 Strongly disagree
- 88 Don't know
- 99 Refused

40. I plan to move to Puerto Rico someday.

- 01 Strongly agree
- 02 Somewhat agree
- 03 Somewhat disagree
- 04 Strongly disagree
- 88 Don't know
- 99 Refused

41. It is important for my family to celebrate Puerto Rican holidays, such as January 6-Three Kings Day, July 25-Constitution Day, June 24-San Juan Bautista Day or March 22-Abolition Day.

(adapted from the Acculturation and Structural Assimilation Scale: San Antonio Heart Study, at <http://riceinfo.rice.edu/projects/Hispanic Health/Acculturation.html>).

- 01 Strongly agree
- 02 Somewhat agree
- 03 Somewhat disagree
- 04 Strongly disagree
- 88 Don't know
- 99 Refused

42. I would not mind living in an area where there are few other Hispanics.

- 01 Strongly agree
- 02 Somewhat agree
- 03 Somewhat disagree
- 04 Strongly disagree
- 88 Don't know
- 99 Refused

43. I worry more about the economic, political and social future of Puerto Ricans more than I worry about the future of U.S. society as a whole.

(from the Latino Ethnic Attitude Survey, <http://falcon.cc.ukans.edu/~droy/>).

- 01 Strongly agree
- 02 Somewhat agree
- 03 Somewhat disagree
- 04 Strongly disagree
- 88 Don't know
- 99 Refused

44. It is important to know your ancestry (family tree).

- 01 Strongly agree
- 02 Somewhat agree
- 03 Somewhat disagree
- 04 Strongly disagree
- 88 Don't know
- 99 Refused

APPENDIX D  
FOOD FREQUENCY QUESTIONNAIRES

**Short Food Frequency:** *I am now going to ask you questions about foods your child eats. For each food, I want to know whether your child eats it (yes or no), and also approximately how many times he/she eats it, (times per day, week, month, or year).*

**Does your Frequency  
child eat...**

**FRUITS** (whole fruits, e.g., apples, oranges, bananas, mangoes, guavas)

Yes No    ☐ D ☐ W ☐ M ☐ Y

**VEGETABLES** (e.g., lettuce, gandules, sweet potato, yucca)

Yes No    ☐ D ☐ W ☐ M ☐ Y

**JUICES/NECTARS** (100% juice drinks, e.g., apple juice, orange juice, pineapple juice, guava nectar)

Yes No    ☐ D ☐ W ☐ M ☐ Y

**MEAT/PROTEIN** (e.g., eggs, steak, beans, chicken, pork chops, pernil)

Yes No    ☐ D ☐ W ☐ M ☐ Y

**FISH/SEAFOOD** (e.g., tuna, codfish, shrimp, octopus)

Yes        No    ☐ D ☐ W ☐ M ☐ Y

**CARBOHYDRATES** (e.g., rice, potatoes, hot and cold cereals, bread)

Yes No    ☐ D ☐ W ☐ M ☐ Y

**YOGURT**

Yes No    ☐ D ☐ W ☐ M ☐ Y

**FRIED FOODS** (e.g., fried chicken, french fries, fried shrimp)

Yes No    ☐ D ☐ W ☐ M ☐ Y

**SWEETS/DESSERTS** (e.g., ice cream, cake, pie, flan, cookies)

Yes No    ☐ D ☐ W ☐ M ☐ Y

**EXPANDED FOOD FREQUENCY:** *This section is an expanded version of what we just did. Just like above, for each food, I want to know whether your child eats it (yes or no), and also approximately how many times he/she eats it, (times per day, week, month, or year).*

Food Item	Ever Given?	Number of Times per Day	Number of Times per Week	Number Times per Month	Number of Times per Year
<b>FRUITS</b>					
Albaricoque/ Apricot	Y N				
Cereza/Cherry	Y N				
Fresa/Strawberry	Y N				
China/Naranja/Orange	Y N				
Ciruela/Plum	Y N				
Coco/Coconut	Y N				
Guanabana/Soursop	Y N				
Guayaba/Guava	Y N				
Guineo o Banano/ Banana	Y N				
Limon/Lemon	Y N				
Mango	Y N				
Manzana/Apple	Y N				
Melocoton/Peach	Y N				
Melon/Melon	Y N				
Sandia o melon de agua/ Watermelon	Y N				
Pera/Pear	Y N				
Pina/Pineapple	Y N				
Quenapa	Y N				
Tamarindo/Tamarind	Y N				
Toronja/Grapefruit	Y N				
Uva/Grape	Y N				
Otros/Others...Specify	Y N				
	Y N				
	Y N				
	Y N				

Food Item	Ever Given?	Number of Times per Day	Number of Times per Week	Number Times per Month	Number of Times per Year
<b>100% FRUIT JUICE</b>					
Guanabana/Soursop	Y N				
Guayaba/Guava	Y N				

Jugo de China or Naranja/ Orange juice	Y N				
Jugo de Manzana/ Apple juice	Y N				
Jugo de Toronja/ Grapefruit juice	Y N				
Jugo de Uva/Grape juice	Y N				
Melocoton/Peach juice	Y N				
Pina/Pineapple juice	Y N				
Tamarindo/Tamarind juice	Y N				
Jugo de pera/Pear Juice	Y N				
Otros/Others...Specify	Y N				
	Y N				
	Y N				
	Y N				

Food Item	Ever Given?	Number of Times per Day	Number of Times per Week	Number Times per Month	Number of Times per Year
<b>MEAT AND OTHER PROTEIN</b>					
Bistec/Beefsteak	Y N				
Carne de res/ Other beef cuts	Y N				
Carne mechada	Y N				
Carne molida/ Ground meat	Y N				
Jamon o carnes frias/ Ham or cold cuts	Y N				
Chuleta/Pork chops	Y N				
Morcillas/Blood sausage	Y N				
Orejas/Pig ears	Y N				
Patitas/Pig feet	Y N				
Rabito/Ox tail	Y N				
Pernil (lomo de puerco)/ Pork shoulder	Y N				
Tocineta/Bacon	Y N				
Puerco o cerdo/ Other pig meats	Y N				
Pollo con pellejo/ chicken with skin	Y N				
Pollo sin pellejo/ Skinless chicken	Y N				
Huevos cocidos/ Boiled eggs	Y N				



Huevos fritos o revueltos/ Fried or scrambled eggs	Y	N				
Conejo/Rabbit	Y	N				
Pavo/Turkey	Y	N				
Mantequilla de mani/ Peanut butter	Y	N				
Perros calientes/Hot dogs	Y	N				
Salchichas Viena/ Vienna Sausages	Y	N				
Salchichas de desayuno/ Sausages links	Y	N				
Higados o vísceras/ Liver or organs	Y	N				
Otros/Others...Specify:	Y	N				
	Y	N				
	Y	N				
	Y	N				

Food Item	Ever Given?	Number of Times per Day	Number of Times per Week	Number Times per Month	Number of Times per Year
VEGETABLES					
Apio/Celery	Y	N			
Berenjena/Eggplant	Y	N			
Broccoli	Y	N			
Calabaza/Pumpkin	Y	N			
Chayote	Y	N			
Coliflor/Cauliflower	Y	N			
Espinaca/Spinach	Y	N			
Gandules/Pigeon Peas	Y	N			
Habichuelas tiernas/ Green beans	Y	N			
Habichuelas rojas, blancas or pintas/ Red, white or pinto beans	Y	N			
Lechuga/Lettuce	Y	N			
Maiz/Corn	Y	N			
Apio	Y	N			
Yuca/Yucca	Y	N			
Name/Yam	Y	N			
Malanga/Taro root	Y	N			
Batata/Sweet Potato	Y	N			
Pana/Breadfruit	Y	N			
Papas/Potatoes	Y	N			

Papas fritas/ Fried potatoes	Y	N				
Pepinillo/Cucumber	Y	N				
Platano o Guineo verde/ Green plantain	Y	N				
Mofongo/ Fried plantain w/garlic	Y	N				
Tostones/ Fried mashed plantains	Y	N				
Platano cocido o asado/ Boiled or baked plantain	Y	N				
Maduro frito/ Fried sweet plantain	Y	N				
Repollo o Col/Cabbage	Y	N				
Tomate/Tomato	Y	N				
Zanahoria/Carrot	Y	N				
Otros/Others...Specify:	Y	N				
	Y	N				
	Y	N				

Food Item	Ever Given?	Number of Times per Day	Number of Times per Week	Number of Times per Month	Number of Times per Year
<b>FISH AND SEAFOOD</b>					
Atun en aceite/Tuna fish in oil	Y	N			
Atun en agua/Tuna fish in water	Y	N			
Bacalao/Salted Codfish	Y	N			
Camaron/Shrimp	Y	N			
Cangrejo o Jueyes/Crab	Y	N			
Chillo, Sierra/Sawfish	Y	N			
Langosta/Lobster	Y	N			
Ostras o almejas/Oysters or clams	Y	N			
Pulpo/Octopus	Y	N			
Salmon/Salmon	Y	N			
Sardina/Sardine	Y	N			
Trucha/Trout	Y	N			
Otros/Others...Specify:	Y	N			
	Y	N			
	Y	N			
	Y	N			

Food Item	Ever Given?	Number of Times per Day	Number of Times per Week	Number Times per Month	Number of Times per Year
<b>BREADS AND OTHER CARBOHYDRATES</b>					
Arroz mezclado con/rice mixed with	Y N				
Arroz mezclado con/rice mixed with	Y N				
Arroz mezclado con/rice mixed with	Y N				
Arroz mezclado con/rice mixed with	Y N				
Asopao in general/ Rice porridge in general	Y N				
Asopao de.../ Rice porridge with...	Y N				
Alcapurrias/ Fried plantain dough w/ meat	Y N				
Bacalaito/ Salt codfish fritter					
Caldo gallego/ Galician soup	Y N				
Medallones de pollo/ Chicken nuggets	Y N				
Chile con carne y habichuelas/ Chilli w/meat and beans	Y N				
Empanadilla de carne/ Fried dough pocket w/meat	Y N				
Pastel/Boiled plantain dough w/ meat filling	Y N				
Hamburguesas/ Hamburger	Y N				
Macarrones con queso/ Macaroni and cheese	Y N				
Spaghetti, lasagna o otra pasta con salsa de tomate/spaghetti, Lasagna, other pasta	Y N				
Mondongo/Tripe soup	Y N				

Pizza	Y	N				
Sancocho/ Soup of assorted roots w/veg.	Y	N				
Sopa de arroz/ Rice soup w/vegetable	Y	N				
Sopa de fideos y pollo/ chicken noodle soup	Y	N				
Sopa de gandules/ Pigeon peas soup	Y	N				
Sorrullitos/Fried corn sticks w/cheese filling	Y	N				
Tacos	Y	N				
Viandas/ Boiled starchy roots	Y	N				
Otros/Others...Specify:	Y	N				
	Y	N				
	Y	N				
	Y	N				

Food Item	Ever Given?	Number of Times per Day	Number of Times per Week	Number Times per Month	Number of Times per Year
<b>BREADS AND OTHER CARBOHYDRATES</b>					
Cereal frio en general/Cold cereal in general	Y	N			
Cereal sin leche/ Cereal alone	Y	N			
Cereal con leche/ Cereal with milk	Y	N			
Cereal caliente en general/ Hot cereal in general	Y	N			
Pan blanco/White bread	Y	N			
Pan de Yorda o bollo/ Bread Rolls	Y	N			
Pan de maiz/ Corn bread or corn muffins	Y	N			
)Muffins o bizcochitos de bran/ Bran muffins	Y	N			
Pan obscuro/ Whole wheat bread	Y	N			

Panecillos/Biscuits	Y	N				
Panqueques/Pancakes	Y	N				
Arroz en general/ rice in general	Y	N				
Arroz solo/rice by itself	Y	N				
Tortillas de harina/ Flour tortillas	Y	N				
Tortillas de maiz/Corn tortillas	Y	N				
Otros/Others...Specify:	Y	N				
	Y	N				
	Y	N				
	Y	N				

Food Item	Ever Given?	Number of Times per Day	Number of Times per Week	Number Times per Month	Number of Times per Year
<b>MILK AND MILK PRODUCTS</b>					
Batidas o Batidos de leche/ Milkshakes	Y	N			
Leche con chocolate Quick/ Chocolate Milk	Y	N			
Crema Agria/Sour Cream	Y	N			
Mantecado o Helado de leche/ Ice cream	Y	N			
Leche completa/ Whole milk 4%	Y	N			
Leche 1 o 2 %/ Milk 1 or 2 %	Y	N			
Leche descremada/ Skim milk	Y	N			
Leche evaporada/ Evaporated milk	Y	N			
Leche condensada/ Condensed milk	Y	N			
Queso en general/ Cheese in general	Y	N			
Helado de yogurt o de barquilla/ Frozen yogurt	Y	N			
Yogurt sin sabor/ Plain yogurt	Y	N			

Yogurt de frutas/ Fruit yogurt	Y N				
Untados de queso/ Cheese Spreads	Y N				
Otros/Others...Specify:	Y N				
	Y N				
	Y N				
Food Item	Ever Given?	Number of Times per Day	Number of Times per Week	Number Times per Month	Number of Times per Year
DRINKS/BEVERAGES					
Café con leche/ Coffee with milk	Y N				
Café Negro/ Coffee without milk	Y N				
Te/Tea	Y N				
Ice Tea	Y N				
Sodas y gaseosas regulares/ regular soft drinks	Y N				
Sodas y gaseosas dietéticas/ Diet soft drinks	Y N				
Artificially flavored fruit drinks	Y N				
Otros/Others...Specify:	Y N				
	Y N				

Food Item	Ever Given?	Number of Times per Day	Number of Times per Week	Number Times per Month	Number of Times per Year
SNACKS, SWEETS AND DESSERTS					
Bizcocho de mantequilla/ Pound cake	Y N				
Galletas/Cookies	Y N				
Palomitas de maíz simple/Plain Popcorn	Y N				
Palomitas de maíz con mantequilla/Flavored popcorn	Y N				
Sodas y gaseosas dietéticas/Diet soft drinks	Y N				
Papitas, pretzels, otras frituras saladas/ Potato ships, pretzels, other salty snacks	Y N				

Besitos de coco/ Coconut macaroons	Y N				
alletas rellenas de fruta o crema/Fruit or cream- filled cookies	Y N				
Donas o pan dulce/ Donuts, Danish	Y N				
Bombones o dulces solidos/ Hard candy	Y N				
Ensalada de frutas/ Fruit cocktail	Y N				
Flan o tembleque/ Milk custard	Y N				
Gelatina de fruta/fruit jello	Y N				
Helado(Esquimalitos, iceys, etc.)/Popcicles	Y N				
Piraguas, limbers/Ice with flavored syrup or snow cones	Y N				
Jalea o mermelada/ Jelly or marmalade	Y N				
Miel/Honey	Y N				
Pastel de fruta/Fruit pie	Y N				
Polvorones/Almond cookies	Y N				
Otros/Others...Specify:	Y N				
	Y N				
	Y N				
	Y N				

## APPENDIX E

### OPEN-ENDED INTERVIEW

#### Adult Caretaker's Diet

First, think about the kinds of foods you ate when you were a child. Describe some typical meals to me you remember from your childhood (breakfasts, lunches and dinners). What kinds of foods did your mother make for you and your family when you were growing up? What are some typical meals in Puerto Rico?

Now think about the kinds of foods you eat today. Describe some typical meals to me (breakfasts, lunches and dinners). Describe some meals to me you have eaten in the last few days. What are your favorite foods? What kind of food do you not eat, and why?

How has your diet changed since you were young? How has your diet changed since moving to the U.S.? (Probe with specific food and/or food groups).

What changes have you made in where you shop? What changes have you made in how you shop/select foods?

What changes have you made in how and what you cook for yourself? For your family?

Why have you made these changes? Why did you not change \_\_\_\_\_?

How do you think your diet compares to women of your age in Puerto Rico? (Probes: more/less healthy; more/less traditional Puerto Rican; specific food and food groups).

#### Children's Diet

Also think about the kinds of foods you make for your child(ren). Describe some typical meals to me (breakfasts, lunches and dinners). What are some of your children's favorite foods? What kinds of food do your children not eat, and why?

How do you think your child's diet compares with children of the same age in Puerto Rico? (Probes: more/less healthy; more/less traditional Puerto Rican; specific food and food groups).



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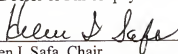
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## BIOGRAPHICAL SKETCH

Jessica M. De Leon was born in New York City in 1964, and spent much of her childhood living in upstate New York. She moved to south Florida in 1979, where she completed high school in 1982. Ms. De Leon received her Bachelor of Science in comparative psychology from the University of Florida in 1989, and her Master of Arts in anthropology from the University of Florida in 1992. She completed her Ph.D. in 2000. Ms. De Leon spent one semester of her master's program studying anthropology and Spanish in the Yucatan Peninsula of Mexico, as part of the University of Florida's overseas studies program.

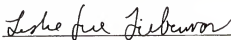
Ms. De Leon's academic and research interests include Latin American studies (Puerto Rico and Mexico), Latino studies (immigration and ethnicity), medical anthropology (Latina health), biological anthropology (primatology) and museum studies (education and interpretation). Ms. De Leon has worked for various women's and minority health organizations in Florida and Connecticut, including Planned Parenthood, the Hispanic Health Council and MammaCare. Jessica has participated in research projects for the University of Florida's Institute for Food and Agricultural Sciences, the Institute for Child Health Policy, and the UF Department of Anthropology. She has presented papers concerning ethnographic research on Puerto Ricans in Hartford, Connecticut, and in Orlando, Florida, at various conferences, including the Society for Applied Anthropology, the Southeastern Council on Latin American Studies, and the Latin American Studies Association.

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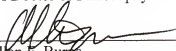
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Professor Emerita of Anthropology

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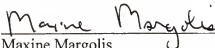
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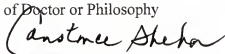
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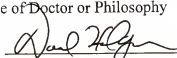
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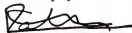
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This dissertation was submitted to the Graduate Faculty of the Department of Anthropology in the College of Liberal Arts and Sciences and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

December 2000

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